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THE EDITOR'S FARM NOTES.

TO CORRESPONDENTS.

A large amount of copy has come in recently from brother farmers. Much of this is valuable and timely and should appear in the near future. Our repeated requests for farm experience are being responded to quite liberally, and we wish to urge you to keep on writing for the FARMER.

One or two have written asking why a certain article, sent a long time ago, has not appeared in the paper. There are several reasons why it is utterly impossible to use every article that reaches us. But have patience, friends, we are doing the best we can.

The FARMER has been complimented from every quarter, especially during the past four months. And a common saying among farmers, who take several leading agricultural and dairy papers, is: "It is the best farm paper I ever read."

Why is this? Our personal opinion (and we know many will agree with us), is that no farm paper in the country gives, in each issue, more of the practical and varied experience of a host of our brother farmers who live upon and daily work their own farms. All phases of farm life, and details of stock and field practice, are faithfully and plainly portrayed in the various departments of the FARMER each week.

We read many of the leading agricultural papers of the country every week in the year. Taken collectively, we find more practical matter, and derive more personal benefit, from the articles written by our brother farmers for the FARMER, in our own farm practice, than in any other farm journal. We now speak from the standpoint of a Michigan farmer. As a farmer, working our own farm, the advice and suggestions given us weekly in this paper by brother farmers, prove to us clearly that the MICHIGAN FARMER is pre-eminently the paper for the progressive practical Michigan farmer.

So then, friends, keep on writing us your experience, your wants, successes and failures, for that is what we farmers need to direct and encourage us to make the most of what we have left in this our chosen vocation. Better times are coming, we verily believe, so let us prepare for them anyway. If we all hang together we can force "good times" to appear and remain for our own benefit, as well as for the "more favored classes."

The duty of every Michigan farmer, it seems to us, is to take and read the MICHIGAN FARMER, give a little of your "experience" occasionally through its columns, and become an active member of one or both the great farm organizations, of which this paper is the chosen organ.

HORSE WEEDERS.

Within a week a dozen or more postals have come in, asking if we have ever used the Breed or Hallock horse weeders advertised in the FARMER. One writer had been informed that they were worthless, and thought this paper should not advertise frauds, etc.

Both weeders are first-class tools, and are all that is claimed for them in the advertisements. We know from personal experience, having had a horse weeder for six years.

At the farmers' institutes we often meet farmers who testify to the great value of these weeders. A weeder is a tool that must be used in time and on time to secure desired results.

We do not recommend a weeder for general use on a very heavy clay farm, full of

stone, especially when covered with small stone over the surface. But our own farm is stony in places, and has some heavy clay loam soil. Both above-mentioned weeders have been used on this soil and we would not go without them.

"What is a weeder used for?" It is more generally used for light surface cultivation of corn and potatoes. Our plan is to go through the corn once with the cultivator, if planted in drills, then follow in a day or two with the weeder.

The weeder levels off the ridges made by the cultivator teeth, killing all the little weeds in their incipency, and leaves the surface level and smooth. The tool is about seven and one-half feet long, and the horse travels along and between every other row. The light spring steel teeth vibrate in all directions and run through the hills or drills, whether of corn or potatoes, taking out all the weeds that have recently germinated in the rows.

When the ground is not too hard, the weeder can be used many times in preference to the cultivator. A larger acreage of

Several correspondents state they have used such a telephone, and would not be without one. We have been in scores of farm homes where these "phones" were in successful use. Many visitors at our farm have examined our phone, then gone home and made one of their own.

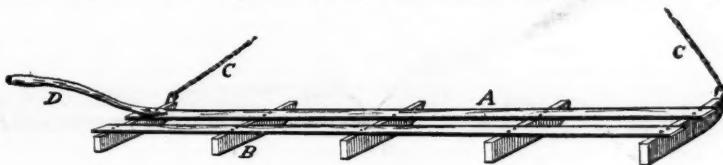
PLASTER ON OATS.

Will you please state whether it would be profitable to sow plaster on oats after they are up, and what the result would be? A SUBSCRIBER.

The only way to find out is by trying the experiment. We used to think it paid, but have lost faith in recent years. We know that, on virgin soil, years ago, when we had plenty of precipitation, the benefits derived from sowing plaster on wheat, grass and oats were many times visible as far as the eye could reach. But now—well we've lost faith, and use plaster only in the stables and manure gutters.

THE POULTRY BUSINESS.

"Got your new henhouse built yet, and what do you think about it?" No, we have not, but have kept our



HANDY CORN MARKER.

ground can be weeded in a day, and a judicious use of the horse weeder will pay many farmers who grow corn and potatoes as a field crop.

WANTS A TELEPHONE.

I put up a 'phone, in accordance with the design submitted in a recent issue of the FARMER. My line wire is of steel, "galvanized," single strand, and running through apple trees instead of posts.

It is as tight as the wire will stand. My line does not run exactly straight; however, I do not see how that could affect it in any way whatever. Now if you will furnish me with details of its construction, more minutely, or inform me of my errors it would be much appreciated. O. G. DAVENPORT. LAFER Co., Mich.

[Every day brings inquiries regarding "that telephone," and one farmer says, "that piece about telephones is worth more to me than the cost of the FARMER for a year, etc. Friend Davenport will not secure good vibration from the galvanized wire. It is better to use fine steel, or electric wire, about No. 16 or 18 gauge, double strand, twisted.

A single strand may do good work some of the time, but is more apt to "sing" in a breeze, or when the air current is just right. Use binder wire, or get of your hardware dealer the same size wire used on broom handles.

It is not necessary for the line wire to run in a perfectly straight direction, but the general course should be as nearly straight as possible. The sound waves follow a tense wire more perfectly, if there are as few turns or crooks as possible in erecting.

Any kind of a tree, or limb of a tree, that does not vibrate too freely in the wind, makes as good a support for the line wire as any post. But it is better to set a post, than to deviate too far one side in order to reach a tree.

After your line wire is erected, be sure that not a single limb, twig, or even leaf touches the line wire. If you have not tension enough, pull the main wire to one side somewhere along the line.

Another reader asks if any cigar box will do. Yes, if it is well made and solid. It must be solid and nailed tightly, as there will be a great strain on the corners and across the center of cover.

gation points, the College and Station is the place to go for a complete solution.

All kinds of cow stalls, fastenings, stock appliances. In fact, almost everything is found at this school to assist the farmer and dairyman. There never was a time when the College and Station was in so good a condition to assist the farmer student, and the farmers of the State, as now.

April 20, 1897.

For the Michigan Farmer.

A HANDY CORN MARKER.

A flexible seven-eighth by six-inch board, 16 feet long, was procured at the lumber yard. This was slit lengthwise, making two three-inch strips. These were placed some 16 inches apart, and to them were nailed five 2x6 runners, one and one-half to two feet long, the front end being rounded like a sled runner.

The runners are 44 inches apart, but can be any distance one desires to plant. To the end runners a strip is nailed for a handle, in such a manner that the operator can walk upon the last mark made the previous trip, and so keep the marks straight. I have never seen straight marks made unless the marker was held in place. The handles should be braced to one side so as to stiffen them.

To attach the horse I prefer ropes or wires six or eight feet long. These are attached near the ends and connected with the traces of the harness, no whippletree being used. If the right distance from the ends, very little horse motion will be observable, and the marker will run smoothly and steadily. The strips being flexible it will adapt itself to the inequalities of the ground unless they are quite abrupt.

I have used such a marker two years, with a good degree of satisfaction, and I must have straight marks. It is light, easily picked up with one hand at the center and carried around at the ends. Twenty acres can be marked, both ways, in one and one-half days, lessening friend Alvord's cost of marking, as given in the FARMER of April 10th, one-half.

To adapt it for beans, I took off the second and fourth runners, and put two runners in the space so left, making marks 29½ inches apart.

A. R. PALMER.

JACKSON Co., Mich.

[This makes an excellent marker, on fairly smooth level ground, as we know from experience. We make a cut to illustrate friend Palmer's description.

In a note to the Editor our friend states that the handles should be attached so that the operator could steady the machine with the right hand and drive with the left. In such a case each handle should turn to the right.

Old cultivator or plow handles could be attached so as to be reversed at will, if the operator should be left handed. We make the cut showing but one handle (D) attached at the left end of the marker.

For our own use we should attach each handle to turn outward, as we are accustomed to work "both handed." This helps to rest each arm from the fatigue resulting from holding each in a cramped position during the whole passage across a large field.

We should prefer using four-inch strips (A) of hard flexible wood. B indicates the runner. C shows where the ropes or wires are attached, running thence to the traces. It seems to us that the marker would run steadier if the ropes are attached to the end runners, rather than to the cross strip A.—Ed.]

For the Michigan Farmer.

FIELD CORN IN DRILLS.

I have raised drilled corn for several years. Have sown both three and one-half and four feet apart.

In drilling corn, I would take into consideration the fertility of the soil. Where a high state of fertility exists, three and one-half feet apart has proven the most satisfactory with me.

I have always drilled corn for a special purpose, that of feeding cattle for market, drawing the corn from the field and feeding as needed without husking. I would not drill corn to harvest and crib in the usual manner, but for my method of feeding I prefer it to the check-rowed corn.

You will find another objection to the drilled corn, if you wish to sow the field with wheat, and seed in the spring with clover. That is, cultivating continuously in one direction forms ridges along the rows, although these may be somewhat obliterated, if the wheat is not sown until after the corn is cut, by a thorough going-over with a spring-tooth harrow.

You will also find that your corn will probably be nearer six to eight inches apart than twelve to fifteen. WM. GEER.

KALAMAZOO CO., Mich.

[This will be our first attempt at growing field corn in drills. We think we can drill in the seed without getting it much too thick, as our drill is selected for this very work, and drops about 18 to 20 kernels to a rod.

We expect to harrow the ground thoroughly before and after the corn comes up, using a five-eighths-inch tooth, steel frame, lever harrow, with teeth slanted backwards.

After each cultivation we shall use Breed's weeder, also the Hallock, advertised in the FARMER. This will help clean out the weeds in the drills, and prevent the ridged effects spoken of by friend Geer.—ED.]

For the Michigan Farmer.

FENCING.

A FENCE THAT WILL NOT TURN STOCK, IS NO FENCE AT ALL.

There is nothing on the farm quite as aggravating as the fence problem. When this country was well covered with timber it was not much of a task to go into the woods with a couple of hired men and cut, split and draw rails enough for one or two hundred rods of fence.

There are not very many farmers in southern Michigan to-day that have such woods, and even if they did, a good financier would not allow his men to be so extravagant as to cut such valuable trees for fences. Rail timber must be straight, free from knots, comparatively speaking, and should be black ash, oak or red elm. A few farmers have used butternut, basswood and white ash, but find that they are not lasting.

Occasionally one will see an old fence that has been standing nearly half a century, and, on examining it, find that the rails are black walnut. There are not very many, if any, men now who would think of cutting a black walnut tree for rails. Yet when the country was new, men were just that foolish; and worse still, some pioneers tell us how they would heap this valuable timber in immense piles and burn it, not knowing how valuable it would be, but as a fence material there has never been anything superior to walnut.

Fencing is one of the heaviest expenses on most farms and some people are of the opinion that there are methods of farming which, if followed, would be more profitable than letting the stock roam over all the farm. As a rule, however, the average farmer finds it convenient to have his farm enclosed and several cross fences beside a lane, which is unavoidable.

Nothing has caused the farmer more study than how to keep his fences in repair. A good many dollars he has spent for cheap shoddy wire fences that would be a damage to his farm after the first year. The principle reason why one goes to the expense of building a fence is to turn stock, and a fence that will not turn stock is no fence at all.

If a person was paying seventy-five cents or a dollar per rod for a good fence—one that would last nearly a lifetime with the re-setting of posts—it would be a profitable investment. On the other hand, a fence at fifteen or twenty cents a rod would be expensive, for no such fence has proved durable. The great question arises, "If fence we must, how can it be done with the present price of produce?" The thoughtful agriculturist is not thinking merely of to-day; if he was, one would be safe in saying that he who goes into agriculture is a fool or lunatic, but he is looking and planning years ahead, without which there is no such thing as success.

The least fence one can use, and do so conveniently, the more profitable he will find it to be. On a farm of 100 acres where there is a road half way around it, and with the adjoining land-owner doing his part of the line fencing, it will require 850 rods, or $8\frac{1}{2}$ rods to the acre. This would divide the farm into eight fields, to say nothing of chicken parks, house yards and barnyard fences.

One of the best fences for a farmer to build is the slat and wire, and of these there are several kinds both good and bad. But the nine double strand, evenly spaced off, with pickets eighteen inches apart, is one of the best. The posts can be set sixteen feet apart and should be swamp oak

or red cedar. The end post, if a foot in diameter and nine feet long, set six inches more than half its length in the ground, will make a good place to begin weaving from without much bracing.

It is always well to anchor the end or corner post. This can be done by taking a piece of an old wagon tire. Have a loop made in one end large enough to slip over the post, bringing it down even with the ground. Fasten a large block of wood to the other end and sink in the ground as many feet from the post as the post is set in the ground. This will bring the connecting rod on an angle of forty-five degrees and when well covered with stone and earth the post would break off before it would pull out.

A machine to build this kind of fence costs from \$12.50 to \$15. Such a machine will last more than a lifetime if properly used and housed.

It is a good plan, if one is living in a neighborhood where the farmers are trying to keep their fences in repair, to co-operate and buy a partnership machine. This works well, for we have one in our neighborhood which cost us \$12.50—five of us buying shares at \$2.50. It has never yet been the case that two of us wanted to use it at the same time and the machine has built a thousand rods or more of fence. While it is a partnership machine and owned by only five of us, any other neighbor who wishes to use it is perfectly welcome to do so at any time when not in use by the owners, free of charge. This co-operative plan reduces the price of the fence to a certain extent and does not lessen its good qualities.

It will pay to have posts sawed, if one is getting short of timber, for the saw bill is nothing compared with the extra posts one will get from the same timber. Posts sawed tapering, 2x4 inches at top and 4x4 at bottom, and seven feet long, when set in the ground two and a half feet will not heave out like they do where driven.

Driving posts on loose, mucky soil may be all right when the soil is free from stones, but on sand, gravel or clay, one is sure to split the small end, get it crooked, or perhaps not half deep enough.

Posts seven feet long when set leaves four and a half feet out of ground. By using pickets four feet long it leaves the posts about six inches higher than the fence, so that in case stock gets to reaching over the fence for grass, a barbed wire can be stretched on top of the posts or just above the pickets.

To do this right, fasten one end solid in the ground so that it will run directly over the top of the end post. Stretch the wire the whole length of the fence and fasten on top of end post, doing likewise at the starting point. Then drive a staple only part way into the top of the other posts. This will leave the wire so that if a critter runs against it the strain will be on the whole length of the wire, and it will not break so easily. It was my intention in this article to speak of several different kinds of fences, but owing to its length will omit that for this time.

This is the time of year to improve our spare days building and fixing our fences. A few days now devoted to this work will save one a good many steps during the summer and perhaps more than the real cost of a good fence in crops that would otherwise be run over and destroyed.

HILLSDALE CO., Mich.

E. F. BROWN.

For the Michigan Farmer.

CORN IN DRILLS.

I have been drilling my corn for about 14 or 15 years with an eleven-hoe grain drill, and am well satisfied with the results.

Have the ground well fitted. There should be a shoe on the drill hoe to insure an even depth in planting, and good covering.

Use two pieces of pine two by four, 10 or 12 inches long, notched in for the drill hoe, and hewed off at the front and like the nose of a stone boat. Fasten onto the hoe with two bolts put through edgewise. Don't cut your notches deep enough to let the pieces come quite together, but let them grip on the hoe, tightening the burrs on the bolts. This insures good covering and even depth and does away with following with the drag the same day for fear of a shower.

Eighteen to twenty kernels to the rod is about right. Start your drill on hard ground, where it won't cover, and adjust the feed until it drops the right amount.

Now about harrowing. I harrow mine about three times, twice lengthwise and once crosswise, if the ground is dry enough, just as the corn is coming up. I use a leveling harrow of my own make, with 60 five-eighths steel teeth, light frame, coupled with rings. I raise the snout nose corn; the roller is worth a great deal more than the dent, and I can raise more corn.

William E. Drewatt's advice is all good. I go through my corn and cut or pull the weeds once after I am done cultivating. Do all my working with a two-horse cultivator.

I cut my corn with one horse and sled, home made. Two men will cut from five to seven acres a day. D. SHADDUCK.

EATON CO., Mich.

[We use the same style of drill and had not thought of it at all necessary to use shoes on the hoes in our soil. But in loose or sandy loam it would be advisable, we think.

We prefer to harrow our corn ground directly after planting is over, as a general thing. Can kill one crop of weeds before planting, and another crop before the corn is up.—ED.]

For the Michigan Farmer.

FARM WORK.

We have six acres of new ground to clear off for corn and potatoes, that was blown down by a storm eight years ago. The stumps are nearly all rotten and it will plow up quite well.

Fire accidentally got into it last summer and nearly made a clean thing of it, stumps and all, including considerable fence. This will be kept in corn and potatoes for three years, when it will be as smooth as any of the fields, and at that time it will work into the regular rotation with the field with which it forms a part. Then if we have no more storms my clearing will be all done.

I have had more or less clearing to do ever since I was a little boy, and sometimes I think I have had my share of plowing in the roots and picking up and burning, and grubbing stumps. But there is an end to all things; but I often have to wonder where all the roots and sticks come from before a field is completely rid of them.

After the roots then come the stones; it's pick, pick every year, and the small ones don't seem to diminish in number. We have made it a practice to put these stones in large piles at different places in the fields, and sometimes put large piles in the fence corners, but this we think not a good plan.

We shall hereafter draw them to some out-of-the-way place and pile them up, to be used in the future as we want them. Our land is not considered stony, but we always find plenty of them to pick off the meadow. We expect to use quite a large quantity in the horse stable, to make a foundation for a permanent floor. Then we may make a barn floor of them.

I am getting out of patience with plank floors, and am wondering if I can't use these stones and have something permanent, that won't jar, or let the wind blow underneath, or rats get in under. It may be that I am wrong, but it seems to me the proper thing to do. I. N. COWDREY.

GRATIOT CO., Mich.

For the Michigan Farmer.

BROOM CORN CULTURE.

As you wanted information from experience in regard to broom corn culture, I would say any ground that will raise good corn will raise broom corn.

Would prefer well-drained bottom land. Plant about the time you would other corn, but late enough to dodge the frost, as that will kill it. Plant in rows three feet by two feet, six to eight seeds in a hill.

When it is large enough to hoe, thin out to four stalks in a hill. Dwarf Evergreen is the best variety for this latitude. It can be procured of any reliable seed man in Chicago or Detroit.

Fit your ground well before planting, as it starts slow and grows slowly until it gets a good root. You will then have no further trouble, as it will outgrow anything in the shape of weeds.

As to cutting, your broom-maker will tell you when. Some cut sooner than others; I cut when one-half of the seeds are out of the milk. The brush is green and tough then.

Great care should be taken in curing. If you have barn room, cure it under cover, as it keeps its color better. Rain or heavy dew will bleach it.

The best time to take the seed off is as soon as taken from the field; then there will be no damage from mice. A mouse never is as happy as when he is making a nest in a bundle of broom corn worth \$50 to \$80 a ton.

Have raised broom corn and made brooms more or less every year for 35 years. We never have bought a broom in our time. Why not make them yourselves? The tools will not cost you more than \$5, and you will get three times as much for your corn. FAY BARTLETT.

JACKSON CO., Mich.

[Are there any others who have grown broom corn as a general field crop? Has it been a profitable crop to grow in years past? Is it hard on the land?

The tools for making brooms cost less than we supposed. Would it pay a few farmers in each township to undertake the culture of broom corn, and make brooms for their neighbors?—ED.]

For the Michigan Farmer.

FARM EXPERIENCES.

SOME ADVANTAGES IN GROWING MILLET.

To-day I was looking over my last summer's millet stubble from which the crop was cut early in September last fall and no crop put in afterward. It is light sandy loam and the short stubble has all been heaved out by the March freezing, and the surface is all broken into minute cracks so that it could be sowed to clover and grass seed and followed with a smoothing harrow which would cover it at just the right depth for speedy germination. There is scarcely a weed to be seen, although corn stubbles in the neighborhood are well set with sorrel and white clover.

Properly managed, millet is one of the best cleansing crops which I know of. The piece in question was plowed in April and sowed about five weeks later, the ground having been thoroughly worked with a disc harrow twice in the interval. The result was that all weed seeds, which start at that period, were destroyed, leaving a clean

warm seedbed in which the millet germinated quickly, without having to contend with a lot of foul weeds starting on even terms. The millet smothered everything that would start during its period of growth, and the close stubble seems to have done the same for autumn weeds.

As I got four tons from 240 square rods I could afford to stock it down without a nurse crop, and would probably get a crop of clover worth cutting in September. But being very busy with gardening operations I cannot take advantage of the present favorable conditions and shall have to plow it later, probably growing another crop of millet to be followed with rye and stocked with clover a year hence.

A friend, who grows strawberries for a living, is planting a millet stubble with strawberries, marking it in check rows with an iron-shod marker which leaves a clean square at the intersections. The soil is heavy clay and he can plant before it is dry enough to plow, or at least use the early dry weather for planting, which would otherwise be taken if he plowed and fitted the ground first. The millet was sowed after strawberries, thus harvesting two crops last year. L. B. PIERCE.

OHIO.

For the Michigan Farmer.

CLIPPING NEW SEEDING.

Last fall quite a little was said in the FARMER about the proper way to handle the new seeding that had reached such a heavy growth.

We had two fields that were very heavy. We cut one field the very last thing in the fall, contrary to the advice of all. We ran the bar high, so as to leave a good covering. It came through the winter in splendid shape.

We neither pastured nor cut the other piece, though it had a very heavy growth in places. That field also came through the winter in excellent condition.

If the winter had been different, the result would doubtless have been different. OAKLAND CO., Mich. T. C. SEVERANCE JR.

For the Michigan Farmer.

TO ERADICATE ARTICHOKE.

On page 318 of MICHIGAN FARMER of April 24th, in your remarks about artichokes, you seem to fear they would be hard to get rid of.

Last season I had a few growing where I did not want them. When about two to three feet high I pulled them up and threw the tops into the pig yard. They came out easily; the old tubers seemed to be decayed, and the new tubers had not yet formed. It made clean work of them, not a shoot or sprout appearing afterwards.

ASHTABULA CO., Ohio.

A. D. P. YOUNG.

[This seems to us the best plan to clean the ground of the tubers, and if thoroughly prosecuted at the proper time would eradicate nearly "every last one of 'em." But it might be quite a job to hand pull a half acre or more?—ED.]

For the Michigan Farmer.

FIXING A WELL.

I have a well where my windmill stands, that does not furnish water enough.

I am thinking of laying gas-pipe to a spring 50 rods away to connect with the pump.

The water in the spring would have to be raised by the pump about eight feet. Will it work? READER.

LAFER CO., Mich.

[Some of our readers have had experience with wells arranged in this way and we should like to hear from them.—ED.]

Painful Eruptions

Continued to Spread and-Discharge Until Blood was Purified by Hood's Sarsaparilla.

"My sister was afflicted with eruptions around her ears which kept getting worse and spreading until they became very painful. The sores would discharge and were exceedingly disagreeable. We made up our minds we must do something for her and we procured a bottle of Hood's Sarsaparilla. She continued taking it until she was entirely cured." NADIA DUNNING, Concord, Wisconsin.

"After having tumors removed I was very weak. I had a headache all the time and a dreadful tired feeling. My daughter urged me to take Hood's Sarsaparilla and I did so, and after taking three bottles I was relieved of these troubles." E. V. ASTLE, Merrimack, Wisconsin.

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. Sold by all druggists. Get only Hood's.

Hood's Pills cure Liver ills; easy to take, easy to operate. 25c.

MONEY \$1,500 MADE EASY. A year's salary Valuable premiums given. We pay the freight. QUEEN CITY TEA CO., Dept. C, Cincinnati, O.

Livestock.

SOUTHDOWN SHEEP.

We continue the description and history of the different breeds of improved sheep, and this week give an illustration of the Southdown. As the oldest of the English Down breeds, and one that has undoubtedly been used to give symmetry and quality to all other branches of the Down family, its history and characteristics are of general interest to many who prefer other of the Down breeds.

Historically correct is undoubtedly the statement that the Southdown breed of sheep was known as the Sussex Downs at the time of the Norman conquest. But their good qualities did not come to be generally recognized even in adjoining counties until a little over two hundred years ago. It is one of the peculiarities of English agriculture that each county or shire has selected a breed of cattle, sheep and swine, and held to it from year to year with the greatest tenacity. If beaten by the stock of an adjoining county the farmer did not discard his favorites and take up with the victors. On the contrary the breeders and farmers at once set to work to improve their favorites by every means in their power—closer attention to mating, more rigid selection, and better feeding. It is this characteristic which has made England the home of improved breeds, and enabled its farmers to withstand, up to the present time, the intense competition of other lands in farm products. The scrub is unknown to English farmers. Some flocks and herds are better than others, but there is no other country known in which all the live stock—horses, cattle, sheep and swine—show anything like as high average quality, or possess more practical usefulness, than in England. It is a fact, and we may as well accept it, and profit by the example.

But to return to the Southdown. The first writer of any note to mention the Southdown was Mr. Arthur Young, who was quite a voluminous writer on live stock. In an essay published in 1794 he speaks in high terms of their hardiness, and the fine quality of their mutton. Mr. John Ellman, who was breeding Southdowns in 1780, is regarded as one of the great improvers of the breed. He carried on experiments with them for half a century, and his description of what he considered a typical Southdown, written nearly a hundred years ago, is worth reprinting:

"The head should be small and hornless; the face speckled or gray, and neither too long nor too short; the lips thin, and the space between the nose and eyes narrow; the under jaw or chop fine and thin; the ears tolerably wide, and well-covered with wool, and the forehead also, and the whole space between the ears well protected by it, as a defense against the fly; the eyes full and bright, but not prominent; the orbit of the eye (the eye-cap or bone) not too projecting, that it may not form a fatal obstacle in lambing; the neck of a medium length, thin towards the head, but enlarging toward the shoulders, where it should be broad and high, and straight in its whole course above and below; the breast should be wide, deep, and projecting forwards between the forelegs, indicating a good constitution and a disposition to thrive. Corresponding with this the shoulders should be on a level with the back, and not too wide above; they should bow outwards from the top to the breast, indicating a springing rib beneath and leaving room for it; the ribs coming out horizontally from the spine and extending far backward, and the last rib projecting more than the others; the back flat from the shoulders to the setting on of the tail; the loin broad and flat; the rump long and broad; and the tail set on high and nearly on a level with the spine; the hips wide; the space between them and the last rib on either side as narrow as possible, and the ribs generally presenting a circular form like a barrel; the belly as straight as the back; the legs neither too long nor too short; the forelegs straight from the breast to the foot, not bending in at the knee, and standing far apart both before and behind; the hocks having a direction rather outward, and the twist, or the meeting of the thighs behind, being particularly full; the bones fine, yet having no appearance of weakness, and the legs of a dark color; the belly well defended with wool; and the wool coming down before and behind to the knee and to the hock; the wool short, close, curled, and fine, and free from spiky projecting fibers."

The next person who became noted through his success with the Southdown was Thomas William Coke, afterwards Earl of Leicester, who procured his sheep through Mr. Ellman. Through Mr. Coke the Earl of Ergemont, the Duke of Bedford, and the Duke of Norfolk, introduced the Southdown upon their estates, and they proved so acceptable to the tenant farmers that the breed spread rapidly.

Coming down to a time within the memory of some yet living, the name of Jonas Webb stands out prominently as a breeder and improver of the Southdown. He started breeding about 1820, when quite a young man, and carried on the work till his death at the age of sixty-six in 1862. Before his death the Babraham flock of Southdowns was admittedly one of the greatest and best known of the flocks of England of any breed, and his success in the show ring, and the high prices his sheep brought at public sales and ram lettings, placed the Southdown in the first rank as a profitable sheep.

The Southdown was introduced into the eastern and southern States at an early day, and on the plantations of Virginia and Kentucky, the farms of Maryland, Pennsylvania, Ohio and Michigan, good flocks could be found 40 years ago. They were displaced in the northern States first by the Merino, owing to the high price of fine wool during and after the war, and later by the Shropshire, one of its mixed blood descendants, because of its larger carcass, somewhat heavier fleece, and quicker growth. The Shropshire owes its best qualities to the Southdown, which it has so largely displaced on American farms. The Southdown stands in the same relation to the other

Down breeds that the Arabian horse does to the improved breeds of horses—it has given them the qualities which enable them to hold their places with all civilized people, and even to cause the original breed to be forgotten.

In form the Southdown is a model of symmetry for a meat-producing animal. It is smaller than the Shropshire, has a finer, closer and more compact fleece, which is only surpassed in fineness by the Merino. It is a hardy sheep, makes the best possible use of its food in the production of flesh and fleece, is of quiet disposition, and easily handled. In quality of mutton it stands at the head, and in dressed compared with live weight of carcass will stand even with the best of any breed.

THE REVIVAL OF CATTLE BREEDING.

If there is anything in signs upon which to predict future events, it seems to be an assured fact that cattle breeding will again become a profitable business, and that within the year. The public sales held within the past month show that the great beef breeds, such as the Shorthorn, Hereford, Galloway and Polled Angus, are in active demand by cattle owners, who see in the future a most profitable business in growing good beef cattle. But little has been done in the past few years to improve the cattle on the western ranges, and in the middle states, through the development of dairying, good beef cattle have become as

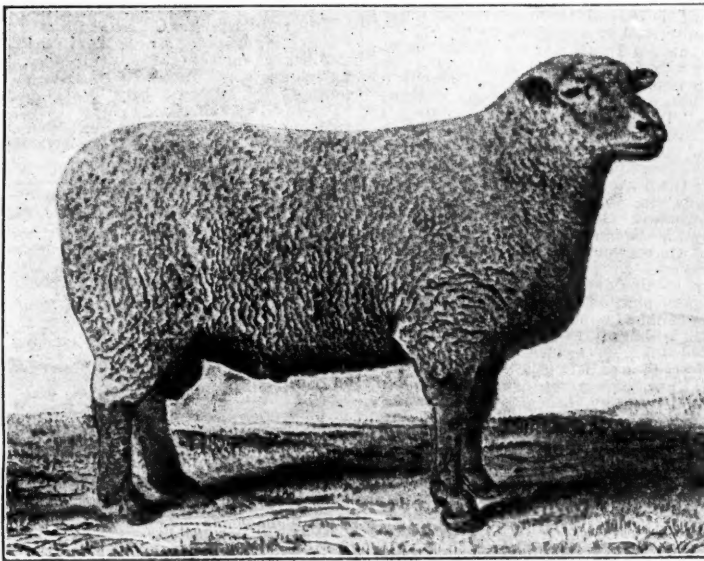
bill as a general purpose sire by giving his descendants great milking as well as beef-making qualities. He was followed by Volunteer 101205, a bull of Scotch blood, bred by W. A. Harris, of Lenwood, Kansas, got by Thistle Top 83576, out of Imp. Victoria 63d, by Pride of the Isles 4527. This was a grand bull, very straight and compact, and of great substance and fine quality. When no longer useful in the herd he was shipped to Buffalo, and the shipper wrote Mr. Boyden that he "was the very best bull he ever saw." He went to the English market. His youngsters in the herd show the same ability to put on flesh, and are wonderful feeders. At the head of the herd at the present time is the young Scotch-bred bull Roan Champion, by Banner Bearer 117933, dam Golden Leaf by Spartan Hero 77932, and tracing to Imp. Golden Galaxy by Senator 37441, a granddaughter of the renowned Champion of England (17526), a bull that made Mr. Cruickshank famous. If Champion of England was a better bull at his age than Roan Champion then he was a wonder, for this young bull is a champion in individuality as well as in name.

We may add in conclusion that the Springbrook herd to-day does not contain an ordinary animal. They are the selected results of 20 years of careful breeding by a man who always demanded individual excellence as well as good breeding, and are true types of the best Shorthorns—fit to live and fit to die.

THUMPS IN PIGS.

To the Editor of the Michigan Farmer.

In the issue of the 27th ult., I see a question asked about thumps. I do not feel like



SOUTHDOWN YEARLING RAM.

scarce as song birds in February. Everything, therefore, points to a large demand for well-bred cattle, as the result of the better prices ruling for good beef cattle. Michigan has lost prestige in the past five or ten years as a producer of good cattle. The grand herds of cattle of the beef breeds have largely disappeared, and their places have been taken by the Jersey, the Holstein and the mongrel scrub. Her farmers are again becoming interested in feeding, and must have good cattle to make a start. This year the demand for bulls of the beef breeds has been so great that the supply is exhausted. There are few or no Shorthorn or Hereford bulls fit for service in the State.

It is at this opportune time that W. E. Boyden, owner of the Springbrook herd of Shorthorns, one of the very few herds that have been maintained at a high standard during all these years of depression, has decided to catalogue and offer for sale every animal in the herd—some sixty head. It is the first time in the twenty years he has been breeding that he has offered his herd without reserve. We have looked the herd over within the past few days, and can say without hesitation, that there was never a finer lot of useful cattle offered at any sale ever held in Michigan, even at a time when the Shorthorn held first place in the State. Our judgment on this point we are willing to submit to the breeders or feeders who will be present at this sale. The herd consists of eight young bulls, none quite old enough for service, and over fifty head of females, from yearling heifers up to middle age. They are of Scotch, Bates and combined blood, some of the choicest individuals being Bates, topped with Scotch bulls, and Scotch foundations with Bates tops. There are also Roses of Sharon, Bates topped Young Marys, and representatives of such Scotch families as the Mysie, Nonpareil and Duchess of Gloster.

As showing the breeding of the herd, we mention the bulls Mr. Boyden has used in it within the past 15 years: The Duke of Crowfoot 33332, a highly bred Renick Rose of Sharon, and a bull of fine finish and quality. Commander-in-chief 47714, a Scotch-bred bull of very fine quality, and a noted show bull. He had size, constitution and quality, and imparted them to his stock. Lord Hilpa 63417, a noted Kentucky show bull, by Geneva Wild 51776, and tracing to Imp. Loo Belle by 3d Lord Lally (24408). Baron Barringtonia 96060 imported in dam by Wm. Wright, of Canada, was a straight Bates bull of the Barrington family, by the Duke of Rosedale 19th (49479), and filled the

saying much about pig raising, as I have a large sow around with one pig; but my father has had for several years as high as seventy-five and one hundred of the hog kind around at a time. I never knew of a case of thumps when the sows, at farrowing time, were in pens with ground floors with good beds; but let them be in pens with plank floors, and almost invariably when the pigs were two or three days old they would get fat and choke up, and in a few days die if they were not taken out of the pen. If taken out before they got too bad they would recover. I do not know what was the cause, but those pigs on the plank floors did not seem to take the exercise that those of the same age would in other pens.

E. A. AVERY.

STOCK NOTES.

THE West Texas Stockman thinks the day of the sheepman is coming. It says: "Sheep are good property, and the fact will soon be forcibly demonstrated to the doubting Thomas. A few months ago a bunch of 14,000 sheep were considered doubtful collateral for a loan of \$4,000, and a few weeks ago 1,400 sheep sold for \$4,000. The sheepman has had rather a tough experience of late, but indications are that he is soon to have another inning."

SCIENTISTS tell us that sunshine is one of the best microbe killers and consumption cures. Dr. Stalker, Iowa State Veterinarian, discovered on his trips through that State that those cattle stalled nearest a light were freest from disease. This is a good point for dairymen to remember when overhauling the barn or building a new one, i. e., put in more windows on the south side and have the stable so arranged that the cows may receive sunshine. We commend his observations to the attention of those who have dark basement barns, or keep their animals so closely housed that they rarely have the benefit of this great stimulant to health and vigor, and slayer of disease germs.

SILAS HUNTLEY, as all old timers know, was a prominent figure in our hog market here in 1864, and a buyer of hogs for the old Chicago Packing and Provision company when B. P. Hutchinson piloted that big concern to fame and fortune, after reading a paragraph in this column in answer to an inquiry as to the highest price for hogs in this market, and our answer to the same that the highest of which we had any record

was \$13.35, in 1864, writes the Journal that he sold to Eli Phillips, another well-known old timer, in September, 1864, a drove of 226 at \$13.75.—Chicago Journal. At that time, however, greenbacks were only worth about 50 cents on the dollar, so that the prices mentioned were not so high as they seem. Gauged by what it will buy \$6 is as much to-day as \$13.35 at that time, but of course it will not pay as much debts.

A WRITER in the Rural World says: "The real cost of keeping sheep is comparatively less than that of any farm stock. To make pork, a great proportion of the food consumed is cash grain; and to make beef, butter or cheese, nearly everything used is that which would bring money in the market." We can hardly understand how the above statements can be correct. Certainly the diet of the hog is much more varied than that of the sheep, while he eats about everything a sheep will. Would a sheep be a good scavenger around a creamery or cheese factory? A hog will eat grass like a sheep, dig down into the earth for roots and insects, consume decaying or wormy fruit, spoiled grain, or, in fact, anything that can be used as food, whether vegetable or animal. Probably the writer in the Rural World never kept hogs.

DESCRIBING the razor-back hog, a southern writer says he is possessed of many good qualities, very thin, back well arched, always stands well on his feet, body shaped much like a sunfish or pumpkin seed; is about two feet tall and six inches in width; has usually a gray or a sandy appearance; is very long from the shoulder to where the jaw ought to be. His nose is like some people's, very long and always in other people's business. He has a keen eye to business and never overlooks an opportunity to get something for nothing. I was told that the way to determine when he was fat enough to kill was to have a person seize him by the ears and lift him off his feet, and if he balanced backward to hold onto him, as he was prime pork; but if he went over on his head, to turn him loose again. The whites favor the razor-back because he is hard for the negro to catch and steal, and the railroad companies like him because when they run over one he does not grease the rails and impede the progress of their trains. With cottolene for culinary purposes, the razor-back is all right. Another writer says a razor-back "is the only bird of prey that is amphibious in its habits, and can lift a gate off its hinges without ruffling a feather."

Treatment of Foot Rot in Sheep.

Prevention is better than cure, and the best preventives of foot rot and other sheep troubles are disinfectants and antiseptics.

Among all the disinfectants of primary origin, carbolic acid is the most powerful, but its poisonous and corrosive properties preclude its free use.

The invention of Chloro-Naphtholeum furnishes a preparation in which the dangerous qualities of carbolic acid have been rendered innocuous, without lessening its disinfecting and antiseptic properties. Chloro-Naphtholeum is a safe and certain preventive and cure for foot rot, scab, worm in the throat, etc. The very best and most economical sheep dip; it is sure death to ticks, red lice and maggots, as well as all other insect enemies of animals and plants. It is extensively used in this country and Europe. Being diluted for use with a large proportion of water, it is the cheapest thing for its various uses that can be had. About one cent per gallon covers the cost. The West Disinfecting Co., 206 & 208 East 57th St., New York, will send a sample bottle of Chloro-Naphtholeum to anyone free upon request. The Company has established a branch at 19 Jefferson Ave., this city, and all Michigan orders for this great sheep dip sent there will be promptly filled.

Dispersal Sale —OF— 60 HEAD —OF— SHORTHORNS

The Springbrook Herd.

On THURSDAY, June 3, 1897,

The Result of 20 Years' Breeding.

For the first time since the Springbrook herd was started, buyers will have an opportunity to bid on the tops, as not an animal will be reserved. The herd never looked better, or was in better shape than at present. With the market for beef as good as at present, the Shorthorn, with its combined characteristics for beef and milk, is the breed for Michigan.

For terms and full particulars send for catalogue, which will be ready for distribution May 15th.

W. E. BOYDEN,
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SKABCURA \$2.00 PER PACK
AGE, EXPRESS
PAID, TO MAKE
200 GALLONS DIP FOR TICKS. IF NO
HOME AGENT, ORDER ONLY FROM
SKABCURA DIP CO., UNION STOCK YARDS, CHICAGO

13 LIGHT Brahma eggs for \$1.50 from a grand pen of 5 birds bought in Ohio in March, mated to breed prize winners. F. M. Bronson, Vermontville, Mich.

The Horse.

BONE SPAVIN—CAN IT BE CURED?

That is the question asked by one of our readers, and it is one which is constantly being discussed by horse owners. Perhaps the best way to answer such a question is to describe what spavin is. There are two kinds—bog, or blood spavin, as it is termed, and bone spavin. In the present instance the inquiry is about bone spavin, and we quote the description of Dr. Lian-tard, the eminent veterinary surgeon, as to what a bone spavin really is, and the only means yet discovered for the successful treatment of the disease while in a curable form:

"This affection, popularly termed *bone spavin*, is an exostosis of the hock joint. The general impression is that in a spavin-affected hock the bony growth should be seated on the anterior and internal part of the joint, and this is partially correct, as such a growth will constitute a spavin in the most correct sense of the term. But an enlargement may appear on the upper part of the hock also; or possibly a little below the inner side of the lower extremity of the shank bone, forming what is known as a *high spavin*; or, again, the growth may form just on the outside of the hock and become an *outside or external spavin*. And, finally, the entire under surface may become the seat of the osseous deposit, and involve the internal face of all the bones of the hock, and this again is a *bone spavin*. There would seem, then, to be but little difficulty in comprehending the nature of a bone spavin, and there would be none but for the fact that there are similar affections which might confuse a diagnosis if not very carefully and intelligently made.

"But the hock may be spavined, while to all outward observation it still retains its perfect form. With no enlargement tangible to sight or touch the animal may be disabled by an *occult spavin*, an anchylosis in fact, which has resulted from a union of several of the bones of the joint, and it is only those who are able to realize the importance of its action to the perfect fulfillment of the function of propulsion by the hind leg, who can comprehend the gravity of the only prognosis which can be justified by the facts of the case—a prognosis which is essentially a sentence of serious import in respect to the future usefulness and value of the animal. For no diseases, if we except those acute inflammatory attacks upon vital organs to which the patient succumbs at once, are more destructive to the usefulness and value of a horse than a confirmed spavin. Serious in its inception, serious in its progress, it is an ailment which, when once established, becomes a fixed condition which there are no known means of dislodging. The periostitis, of which it is nearly always a termination, is usually the effect of a traumatic cause operating upon the complicated structure of the hock, such as a sprain which has torn a ligamentous insertion and lacerated some of its fibers; or a violent effort in jumping, galloping, or trotting, to which the victim has been compelled by the torture of whip and spur while in use as a gambling implement by a sporting owner, under the pretext of 'improving his breed'; or the extra exertion of starting an inordinately heavy load; or an effort to recover his balance from a misstep; or slipping upon an icy surface; or sliding with worn shoes upon a bad pavement, and other kindred causes. And we can repeat here what we have before said concerning bones in respect to heredity as a cause. As to this, our own experience is an authority—we do know of equine families in which this condition has been transmitted from generation to generation, and animals otherwise of excellent conformation rendered valueless by the misfortune of a congenital spavin.

The evil is one of the most serious character for other reasons, among which may be specified the slowness of their development and the insidiousness of their growth. Certain indefinite phenomena and alarming changes and incidents furnish usually the only portents of approaching trouble. Among these signs may be mentioned a peculiar posture assumed by the patient while at rest, and becoming at length so habitual that it cannot fail to suggest the action of some hidden cause, tending to some undeterminable result. The posture is due to the action of the abductor muscles, the lower part of the leg being carried inward, and the heel of the shoe resting on the toe of the opposite foot. Then an unwillingness may be noticed in the animal to move from one side of the stall to the other. When driven he will travel, but stiffly, and with a sort of sideling gait between the shafts, and after finishing his task and resting again in his stall, will pose with the toe pointing forward, the heel raised, and the hock flexed. Some little heat and a considerable amount of inflammation soon appears. The slight lameness which appears when backing out of the stall ceases to be noticeable after a short distance of travel.

A minute examination of the hock will then begin to reveal the existence of the lesion, in a bony enlargement which may be detected just at the junction of the hock and the cannon bone, on the inside and a little in front, and tangible both to sight and touch. This enlargement or *bone spavin* grows rapidly and persistently and soon acquires dimensions which render it impossible to doubt any longer its existence or its nature. Once established, its development continues under conditions of progress similar to those to which we have before alluded, in speaking of other like affec-

tions. The argument obtained by some that because these bony deposits are frequently found on both hocks they are not spavins, is fallacious. If they are discovered on both hocks, it proves merely that they are not confined to a single joint.

Having thus fully considered the history of bone spavin we are prepared to give due weight to the reasons which exist for the adverse prognosis, which we must usually feel compelled to pronounce when encountering it in practice, as well as to realize the value of an early discovery of the symptoms which denote its invasion of the organism. It is but seldom that the necessary advantage of this early knowledge can be secured, and when the true nature of the trouble has become apparent it is usually too late to resort to remedial measures which, if duly forewarned, a skillful practitioner might have employed. We are fully persuaded that but for the loss of the time wasted in the treatment of purely imaginary ailments very many cases of bone spavin might be arrested in their incipency and their victims preserved for years of comfort for themselves and valuable labor to their owners.

In all stages and conditions of the disease, whether the spavin is nothing more than a simple exostosis, or whether accompanied by the complication of arthritis, there must be a total suspension of effort until the danger is over. Less than a month's quiet ought not to be thought of—the longer the better.

Good results may also be expected from local applications. The various lotions which cool the parts, the astringents which lower the tension of the blood vessels, the tepid fomentations which accelerate the circulation in the engorged capillaries, the liniments of various composition, the stimulants, the opiate anodynes, the sedative preparations of aconite, the alterative frictions and prescribed by one or another. We prefer counter-irritants, for the simple reason, among many others, that they tend by the promptness of their action to prevent by anticipation the formation of the bony deposits. The lameness will often yield to the blistering action of cantharides, in the form of ointment or liniment, and to the alterative preparations of iodine or mercury. And if the owner of a spavined horse really succeeds in removing the lameness, he has accomplished all that he is justified in hoping for; beyond this let him be well persuaded that a "cure" is impossible.

Rest and counter-irritation, with the proper medicaments, constitute, then, the prominent points in the treatment designed for the relief of bone spavin. Yet there are cases in which all the agencies and methods referred to seem to lack effectiveness and fail to produce satisfactory results. Either the rest has been prematurely interrupted, or the blisters have failed to rightly modify the serous infiltration, or the case in hand has some undiscernible characteristics which seem to have rendered the disease neutral to the agencies employed against it. An indication of more energetic means is then presented, and free cauterization with the fire-iron becomes necessary.

For the Michigan Farmer.

LIEN OF OWNER OF STALLION ON GET.

NECESSARY STEPS—SUGGESTED FORM.

L. H., Chelsea, Mich.:—In order to hold a colt for stallion fees, must the dam be recorded before birth of the colt? How must the record be worded? The mare is black, with white face, nine years old. Bred May 24th, 1896. Owner of mare A. W., owner of stallion, J. H. Township of York, county of Washtenaw. Fee for service, \$12.—The owner or keeper of a stallion, upon demand upon the owner of the mare for the price agreed upon for service, has a lien upon the get of such stallion for the period of six months after the birth of the foal, for the payment of the service of such stallion. No benefit may be had from the statute where the owner or keeper has in any way fraudulently misrepresented to the owner of the dam as to the breeding of the stallion. The owner or keeper of a stallion, in order to obtain and perfect such lien must, at any time after such demand and within the period included between the rendition of such services by the stallion and when the colt is foaled, file with the township clerk in the township wherein such dam is owned, the agreement, or a true copy of the agreement, entered into by the owner of the dam for such service, together with such description of the dam as to age, color, or other marks, as the person filing such agreement is able to give. Upon the filing of such agreement, together with the description of the dam, the same operates in all respects as a chattel mortgage during the six months after birth of foal, with power of sale on the foal of such dam, and may be collected, enforced and discharged the same as chattel mortgages. The clerk is entitled to the same fees as for similar services in regard to chattel mortgages. We suggest the following form, to which should be attached the written agreement, if any, or the conditions of service as published in advertisement. Copy should be served on owner of dam, and proof of service filed with township clerk.

STATE OF MICHIGAN } ss.
COUNTY OF WASHTENAW. }

The statement of lien of J. H., owner of the stallion "Nestor" for service to black dam with white face, nine years old, and owned by A. W., of the township of York, County of Washtenaw, Michigan. Said service was given May 24, 1896, under agreement and conditions hereto attached, and there is now due claimant therefor,

over and above all legal set-offs, the sum of twelve dollars, for which said sum a lien is claimed on the foal of said dam.

April 28, 1897.

J. H., Claimant.

To A. W.: Please take notice that the within statement is a true copy of the statement heretofore filed on the 28th day of April, 1897, in the office of the clerk for the township of York, County of Washtenaw, Michigan, thereby creating a lien on property described therein.

April 28, 1897.

J. H.

HORSE GOSSIP.

TENNY, who will be remembered at Salvatore's great antagonist, is showing up pretty well as a sire, two of his get being winners at the Memphis meeting.

THE Kentucky legislature has passed a bill known as the "Glanders bill," which provides for the killing of all horses that may be affected with the dread disease, and a recompense of \$50 per head to the owners of all animals so destroyed.

EXPRESSIVE, 2:12½, the greatest racing 3-year-old that ever lived, has a colt by Boodle, 2:12½, that is destined to be one of the best horses ever seen in California. His blood lines include those of Goldsmith Maid, Lady Thorne, Expressive, three of the greatest mares that ever won races on the circuit.

THE starters in the Kentucky Derby are likely to be Ornament, Typhoon II., Dr. Catlett, Buckvidere, Ben Brown and Goshen. Some others will probably start, but the race is expected to be between these. Ornament has been the favorite at good odds until recently, when Ben Brown and Typhoon II have been bid up nearly even with him. It is expected to be a hard fought race.

THE Flint Driving Club has hung up the following purses for a race meeting in that city beginning June 30: Wednesday, June 30, 2:40 trotting, purse \$250; 2:40 pacing, purse \$300; Thursday, July 1, 2:40 pacing, purse \$250; 2:40 trotting, \$300; Friday, July 2, 2:30 trotting, purse \$350; 2:35 pacing, \$300; Saturday, July 3, 2:30 pacing, \$250; 2:15 pacing and free-for-all trotting, \$300.

When writing advertisers mention Mich. Farmer

Naked Pills

are fit only, for naked savages. Clothes are the marks of civilization—in pills as well as people. A good coat does not make a good pill, any more than good clothes make a good man. But as sure as you'd look on a clothesless man as a mad one, you may look on a coatless pill as a bad one. After fifty years of test no pills stand higher than

AYER'S Cathartic Pills SUGAR COATED.

Horse Owners Should Use GOMBAULT'S

Caustic Balsam

The Great French Veterinary Remedy.

A SAFE, SPEEDY AND POSITIVE CURE.



Prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud

SUPERSEDES ALL CAUTERY OR FIRING

Impossible to produce any scar or bluish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable.

WE GUARANTEE that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio

FOR MAN OR BEAST.



No remedy is the superior of BICKMORE'S GALL CURE. Cures Hives and Collar Galls, Cuts, Speed Cracks, Grease Heel and Scratches in horses WHILE THEY WORK. Cracked & Chapped Feet in cows, and all kinds of External Sores in man. If dealer should not have it send 10c. for trial sample. Bickmore Gall Cure Co., Box 704 OLD TOWN, ME.

Sheepmen

You will have healthier sheep, more and better wool if you use Chloro-Naptholeum Dip. Kills all ticks and lice, cures scab and foot-rot, cleans and increases the growth of the wool.

Chloro-Naptholeum

is a perfectly harmless antiseptic, insecticide, and disinfectant, and the most effective stock remedy known. One gallon sent free upon receipt of \$1.00 to pay freight charges. Agents wanted. WEST DISINFECTING CO., 206 & 208 E. 45th St., New York.



DO YOU FEED FOR PROFIT?

Why Rob You of Your Milk and Flesh?

No Flies, Ticks, Vermen, or Sores on Cows.

Send 25 cents to

Mfg. Co., 1005 Fairmount Ave., Phila., Pa.

They will return 1 pint, and guarantee to refund money if cow is not protected. MERIT brought more duplicate 10 and 30 gallon orders in 1896 than ever before. A bonanza for Agents.

SHOO-FLY

Directory of Live Stock Breeders

CATTLE.

CHOICE JERSEY BULL, 8 mos. old, sired by Stoke Pogle's Cantleaver 28266, dam Bonnie Lib 2d 10125, for sale cheap. A. A. WOOD, Saline, Mich.

J. M. CHASE, Muir, Mich., breeder of Red J. Polled Cattle and Poland-China Hogs. 3 good yearling boars for sale \$15 each.

J. F. & E. W. ENGLISH, Clarksville, Mich., breeders of registered RED POLLED CATTLE, Olney and Sultan heads the herd.

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REGISTERED HOLSTEINS of both sexes and all ages for sale from my World's Fair prize-winning herd. 50 head to select from. Prices low. Terms easy. B. F. THOMPSON, Detroit, Mich.

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DUROC-JERSEY SWINE; Barred Plymouth Rock fowls; Pekin Ducks; Jerusalem Artichokes. J. H. BANGHART, Lansing, Mich.

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the Michigan Central herd of IMPROVED CHESTER WHITES. I have a few head of 30 stock (both sexes) at reduced prices to make room for new comers.

CHOICE LIGHT BRAHMAS.

Eggs, 75 cents for 13; 25 for \$1.25.

The Poultry Yard.

For the Michigan Farmer.

FOR PAY.

In answer to friend Reissman in the FARMER of April 10th, which you think was unjust, I will say that I think it just and still hold to my opinion and believe I will be backed by eight out of every ten of the best fanciers in this country. Mr. Reissman says one thing in his ad. and means another. He says every egg guaranteed to hatch, when he don't mean any such thing, but he does mean he will replace all infertile eggs; so will any honest man, or refund price paid. Now, friend Reissman, I think both of us are laboring under a mistake. When I wrote that article I supposed everyone fully understood we were talking about fertile eggs. Infertile eggs are no good to anyone except to eat, and if by mistake such are shipped out they are always replaced by fertile eggs or the price paid. When my eggs hatch good at home they will hatch when sent anywhere. When they don't hatch at home I will replace by some that will or refund price. Now, friend Reissman, will every egg hatch that is fertile. If you think so you have a big lot to learn about the egg business. You advertise every egg to hatch. Supposing all your eggs are fertile and your customer gets 10 chicks, according to your ad. you are duly bound to send another setting or refund the money. As you are selling eggs for \$1 your customer may get 10 chicks and 13 more eggs which might, in one case in 25, get him 13 more chicks. He would be in luck, but how about you? Not very much in it for you.

Now, I will quote just a little from the Editor of the *Reliable Poultry Journal*, Grant M. Curtis, Feb number, page 866. "It is a simple enough matter. We repeat that all the seller of eggs for hatching is called on to do is exactly what he agrees to do, no more, no less. But suppose the breeder does this, still the eggs he sends out will not all hatch, nor will all of the chicks that come from those eggs develop into prize-winners. Then will come the complaints and there we are. True, if he has kept faith with the buyer, there his responsibility ends—with the one exception that if from some cause or another eggs from the same fowls are not hatching reasonably well at home, in which case we think it is the duty and will be the pleasure of the seller to refill the order or refund the amount paid. The case may be stated like this: What does the purchaser of eggs buy? He does not buy a pen of fowls. He does not buy one or more prize-winners. Not at all. He buys the breeder's chances in certain eggs. That is about the size of it. The breeder has a setting of eggs that he proposes to set. He does know the quality of stock from which the eggs came, and he knows about what his chances are of getting really good results in the chicks that hatch and grow up. These eggs are valuable to him according to his chances in them, the general condition of the poultry industry, such as supply and demand, being taken for granted. Now when the question of selling these eggs arises, the breeder estimates what he is willing to take for his chances in those particular eggs. The single setting of eggs may hatch splendidly and the chicks develop into superior specimens; again, they may not. There is a lottery in "waiting for results"; there is a lottery in hatching eggs; there is a lottery in growing chicks. All these the breeder consciously or unconsciously sums up, then puts a price on the eggs. Remember, he does not put a price on a pen of valuable fowls, nor on one or more prize-winners, not even on one solitary chick, but on his chances of a setting of eggs laid by valuable fowls, which eggs he would have set himself had not someone else bought them. We hold, therefore, that when a breeder sells, for just what they are, 13 or more eggs which he himself, on account of their genuineness, proposed to set, he has discharged his obligation, with the one exception cited above. He sold and has delivered his chances in those eggs; there his responsibility ends."

Here, friend Reissman, is the opinion of a man "way up" on the poultry business, an editor of one of the largest and best poultry papers published in the United States. I will rest my case right here, for I think the right is on my side. Now, friend Reissman, about getting prize-winners from eggs you buy. By this I mean birds fit to win a prize at any winter show. You say, where, oh where, would those poor mortals that want to start in the poultry business but have not the money to pay for a fancy pen of birds, get their start? I say they would seven times out of ten be in the soup if they expected to buy a few eggs and win a lot of blue ribbons from the chicks hatched from them. I have had just a little experience along this line. One of the best posted breeders in Michigan once told me he never got one good chick from eggs bought in his life. Guaranteed eggs hatch no better than the common kind. I got 26 just such eggs once from a big breeder and got just four puny little chicks; two died early; the good die young you know; the other two were never any good; so they lived. The big breeder that guaranteed such big things forgot all about it when I reported the hatch. There is a chance of getting some good chicks from eggs. I for one am willing to take the chances; if the breeder sends me fertile eggs I shall take

my medicine like a man. Remember infertile eggs remain clear; they never rot. Rotten eggs are fertile eggs always. I will never guarantee anyone's old setting hen, or an incubator either. I used to do this but it is played out. Friend Hogue, let us hear from you. How many chicks is a fair hatch from 13 eggs? Can any breeder guarantee 13 chicks from 13 eggs.
Eaton Co., Mich. F. M. BRONSON.

For the Michigan Farmer.

MISTAKES IN THE POULTRY BUSINESS.

The poultrykeeper who depends on the sale of breeding stock for his income, can seldom balance his books before April 1st. The men who are making a specialty of fancy poultry buy earlier in the season, but beginners and farmers, and some thoughtless ones who delay purchasing until the last moment, will be ordering cockerels late in the season. The last cockerel has gone, and in summing up the season's experiences I find I have learned some lessons that may be helpful to others. One mistake was in not buying a few sittings of eggs and rearing cockerels for this season last summer. For what a first-class bird costs, one can buy three sittings of eggs from yards that have a wide reputation, and after all accidents are deducted, one should have at least six fine, high-scoring cockerels to choose from in making up his season's yards, and there is a solid satisfaction in making a selection, where you can compare birds, that can never be felt when you have to write descriptions in detail. You may specify weight, shape, plumage, size of comb, color of legs and back, and all possible details, and the party of the second part may affirm that he has the only bird in America that fills the bill, and then when the bird comes you are surprised and so is the seller when he gets your letter of criticism. The bird you had in your mind's eye was not the same one he shipped you, that is certain, and all the pedigrees in the world will not atone for some defects that show in a new bird. But the cockerel is with you and if you return him you must pay express, so you express your mind freely by mail and then take the ax and go out and make ready an expensive pot-pie.

Another lesson is never to rush in the winter the laying of hens on whom you depend for your supply of eggs for hatching. The forcing system of feeding ground fresh meat and green cut bone will make your hens lay when eggs are high, but by the time you are ready for sittings, the eggs will be less fertile and the chicks that hatch will lack vitality. Hens that are well fed and cared for will lay about so many eggs per year anyway, and I prefer that my birds that lay the eggs for hatching should not begin laying before February; then the eggs will be stored with vitality and the chicks hatch out all at once and be ready for business as soon as they get out of the shell. Whereas, if the hens had layed all winter, the chicks would be three days hatching and then stick in the shell, and mope about without ambition enough to thrive.
HILLSDALE CO., MICH. PRISCILLA PLUM.

POULTRY NOTES.

Would like to have some one that knows, answer through the FARMER if the White Holland turkey will cross with the Bronze turkey. I have some White Holland hens and was going to breed them to a Bronze gobbler, but a farmer neighbor tells me the eggs will not hatch. I never heard this before, but then I never saw them bred together. Will some one that knows tell me right away.—E. F. R., Union City, Mich. [We never heard that these two varieties would not breed together, and we cannot answer this correspondent. Who of our readers have had experience in crossing these two breeds.—ED. FARMER.]

S. H. E., Hamburg, Mich., writes that the shells on the eggs he gets from his hens are so thin they cannot be handled without breaking and wants to know what to feed the hens to remedy the trouble. Give them pounded oyster shells, ground bone, and feed them cut green bone. There is perhaps not lime enough in their feed to make strong shells. See that they have plenty of grit. Shut off on corn, and instead feed a few oats. They may be too fat, and should have less feed and more exercise. Make them hunt for what grain you feed by scattering it among straw or litter.

A CORRESPONDENT asks if there is such a breed of chickens as the Sherwoods. Yes, it is the result of crossing the White Georgia Game on the Light Brahma. They have the characteristics of both the parent breeds in a modified form. They are a large fowl, shorter on the leg than the Brahma, body more compact, breast fuller, legs covered with short feathers to the outward toe, quite stylish in carriage, with erect combs, yellow bills, red ear lobes, white plumage and yellow legs. The plumage is closer than on the Brahma, and free from fluffiness. For matured well grown birds the weights range from nine to eleven pounds for the cocks, and six to eight pounds for hens. Regarded as excellent table fowls and fair layers. Don't think they are as good layers as the Plymouth Rocks or Wyandottes, but are as good as the former for the table.

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PEKIN DUCK EGGS for sale at \$1.50 per 11, from high scoring birds. E. A. CROMAN, Grass Lake, Mich.

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MANN BONE CUTTERS and up TRY THEM BEFORE YOU PAY FOR THEM. NOTHING ON EARTH WILL **MAKE HENS LAY** Like Green Cut Bone. Ill. catg. free if you name this paper. F. W. MANN CO., MILFORD, MASS.

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OUR MOTTO:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to
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AGRICULTURAL COLLEGE, - - MICH.

News from Michigan Granges is especially solicited.

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THE EDITOR'S TABLE.

Dairy and Food Appropriation. The Dairy and Food Department is asking the legislature for \$18,000 per year to carry on its work, an amount practically double that now appropriated. Commissioner Grosvenor very kindly and fully stated his reasons for making this request, in a recent issue of the FARMER.

We dislike to disagree with the views of any public officer of character and energy who wishes to bring his department to the highest standard and compel it to do the most service for the people. In this case we are particularly cautious about advancing our views because the Dairy and Food Department of this State owes its existence and present efficiency more to the State Grange than it does to any other one agency. The Grange has repeatedly demanded that there should be a strong Dairy and Food Department, backed up by stringent laws and sufficient appropriations to enforce them. The State Grange of 1895 passed resolutions calculated to hold up the hands of the commissioner, and advocating an increased appropriation if necessary. The last State Grange approved Commissioner Storrs's work, and commended the work of the department to the favor of the people. In spite of all of this we are forced to the conclusion that the extra appropriation now asked is not necessary and should not be granted.

The bill as introduced practically doubles the working force. Is this necessary? The argument is that the present number of inspectors cannot cover the State; that the commissioner and analyst need to be absent a good portion of the time, attending cases, and that there should be assistants to do the work while they are away. It strikes us that this is a theory rather than a condition. The former analyst had no difficulty in performing his office duties and as well attending such cases as came up. True, if Commissioner Grosvenor carries out his policy of bringing frequent trials for violation of this law, this will take more of the analyst's time. But we understand that there is already employed a clerk who is really a chemist, and who is fully as capable as is the present analyst of carrying on the technical duties of that position.

We believe that while the policy of Commissioner Storrs, which was somewhat that of education and moral suasion, was good for a "starter," Commissioner Grosvenor is entirely right in asserting that there ought to be a more vigorous policy at the present time. Nevertheless, our idea is that this force should be intensive rather than extensive. When the Commissioner, for instance, gets a good case for violation of the vinegar clause in the law, he should push the case to a conviction. If this is given wide publicity it will, to a considerable extent, settle the question of violation of that

particular clause. As soon as he gets a strong case under the new anti-color law regarding oleomargarine, and fights it through to the end, it will, to some extent, settle that phase of his work. To our minds three inspectors will do the field work under this policy just as well as more. The idea that we are to have an elaborate system of store to store examination, employing a large number of inspectors who are a sort of policemen or wardens to patrol the whole state, is to our minds entirely impracticable. We had better have a small department noted for its force and effectiveness. The whole plan seems to us to savor too much of building up a political machine.

If, after two years of faithful service, the Commissioner can convince the public that an additional appropriation would produce proportionally greater results we could heartily favor such appropriation. We can not do so at the present time.

It may be the fair thing to confess that we are somewhat prejudiced against the new administration of the department because of the inexcusable and unwarranted discharge of the former faithful and efficient analyst, Mr. W. L. Rossman, and the appointment, for political reasons only, of a man, who we understand has had but little training in chemistry, and absolutely no training in this particular branch of work.

An Argument for Reform. There is a rumor about Lansing that the work of the Auditor General's office is considerably behind, as a result of the wholesale discharge of old clerks January 1, and the substitution of those wholly unacquainted with the work. It seems to us that this is a sufficient reason in itself for some genuine civil service reform in our State Capitol. The practice is not the fault of any one man, either of the present Auditor General or his assistants, who are probably as efficient as in any department. The fault is in the system and in the sentiment which not only permits this, but really countenances it and unholds it.

A Grave Omission. A year ago the Agricultural College had a delightful and instructive program for Arbor Day. The Governor of the State was present, and he as well as prominent members of the faculty made able speeches on this important subject of forestry, which is represented by Arbor Day. This year, however, for some reason the College failed to keep the day. It seems to us that this was a great mistake. Arbor Day is designed as an object lesson in forestry; a day on which can be taught the much-needed lesson of forest preservation and control. Surely the College cannot do its best work for forestry when it fails to take advantage of the best popular means of arguing the question.

The Grange and Tobacco. We have the following note from a Worthy Sister living in Ionia county: "Is it for the good of the Grange to sell tobacco? Please answer through the Grange department of the FARMER." We presume that by this question is meant, is it for the good of the Order that the Grange should, in its co-operative stores, or through any business arrangement it makes, sell tobacco to its members? Our answer to the question is a most decided and emphatic, No, it is not for the good of the Order. It seems to us there ought not to be any question on this point, and we hope that the condition which probably gives rise to the question will be done away with.

GRANGE NEWS.

PENNSFIELD GRANGE No. 85 is yet living and has regular meetings once in two weeks, on Friday afternoons. We have a nice two-story hall, well furnished, of which we will give full description later. We have well discussed programs which are carried out at each meeting, on topics which are both instructive and interesting.—F. B. G., Cor.

[We shall be very glad to get full description of hall, as promised.—Ed.]

We have a request from a member of Millcreek Grange No. 646, of Williams Co., Ohio, to print resolutions regarding the death of their brother, Michael Amsbaugh, who was a charter member of the Grange and a member of Pomona, and was aged nearly 81 years. We would say that we have not space for resolutions, and would prefer that correspondents themselves write up a brief note about the deceased. These notes we shall be very willing indeed to publish.

PAW PAW GRANGE has adopted the plan of discussing the current topics of the day, and the programs are quite interesting.

During the past winter the legislation before "the servants of the people" has formed topics for many interesting meetings, with the result that many have changed views on some prominent questions, and it has proved a source of valuable instruction to the younger Patrons. In the near future we will take for a subject "Our County," and I believe it will prove a good one.

VAN BUREN CO.

E. A. W.

GROVE GRANGE No. 528 closed a successful contest last Friday night, the winning side scoring 290 points ahead. Losing side will furnish a supper on Friday night, May 7. We have not taken in any new members this year, but will reinstate some of our old ones at our next meeting. I am sorry to say a very few of our Grange members take the MICHIGAN FARMER, and can hardly realize what they lose by not subscribing for it. There is strong hope of a co-operative store in the near future to be operated by Patrons in the counties of Huron, Sanilac and St. Clair.—MRS. C. A. LEPIEN.

ST. CLAIR CO.

KALKASKA GRANGE No. 697 is still in working order. We are few in numbers, but have promise of additions. Some interesting topics are brought before each meeting for discussion. At the last meeting was brought before the Patrons the national lecturer's topic for April, also "What and how to feed horses." One reported horses fed largely on rye straw having died; another fed on silage died. "In absence of hay what can we feed with safety to horses?" was fully discussed, some favoring pea vines and oat straw, sowed together and harvested together before matured. Many objections to depending on rye straw as so many farmers do since the grasshoppers have destroyed the meadows. The horses that died after being fed on rye straw were opened; rye barbs were found through the lining of the stomach and intestines, causing great inflammation of the same.—HELEN A. BARNARD, COR.

KALKASKA CO.

ALPINE GRANGE held its regular meeting Saturday evening, April 17. It was well attended. The program included the following questions:

"Is it advisable for a young man to go in debt for two-thirds of the value of a farm, with present prices, etc.?" Allen Saur.
"Which are more profitable per acre, small or large farms, other things being equal?" Bro. E. A. Carr.

"Woman's work on the farm to-day compared with fifty years ago." Sister K. J. Brown.
"Poultry raising." Sister A. E. Spencer.

All these subjects were well handled and were very interesting.

The Grange decided to have a series of socials during the summer, the object being to raise a fund sufficient to pay for a course of lectures next winter.

The worthy lecturer was elected regular correspondent to the FARMER.—MRS. CAR-RIE CHAMBERS.

KENT CO.

FRATERNITY GRANGE No. 52 has had a very prosperous winter under the efficient leadership of Worthy Master F. J. Fletcher and Lecturer Hon. J. K. Campbell.

Our regular meetings occur once in two weeks, but since the new year we have met very much oftener, so we have had a session almost every week.

The sessions have been well attended and much interest manifested by all the members.

A class of six were given the fourth degree and we now number sixty-two members in good standing—the largest Grange in the county. We are in hopes we shall have another class soon for initiation.

The hard times have been against us in obtaining many new members. Many would like to join. The farmers realize it is a good and grand order, but feel they cannot spare money just now to pay the necessary fees.

Washtenaw Co. should be a good working ground for our order. There are only three Granges within her borders. Surely her fields are white for the harvest. Let us all do our very best to gather in a rich crop of good working "Grangers" this coming year.

WASHTENAW CO.

HELEN H. KELLY, Sec.

GRATTAN GRANGE No. 170 met April 29th. The night was rainy and only 28 were there, and those mostly our young and new members. The Master filled the vacant officers' chairs with these young brothers and sisters, yet there seemed no hesitation, but rather a desire to assist in the official work of the Grange. We think they filled their offices well for the first time. Our fondest hopes will be realized when we can see our young people taking a lively interest in the Grange. We have had very little time for literary exercises for the last two months. Every meeting but one has been given to degree work, and still they come. They are welcome and we have room for more.

Arbor day proved to be a rainy day, but there was a good attendance at the Grattan Union School and Grange exercises in our Grange hall. The school exercises were really grand, consisting of quotations about trees, recitations, history of remarkable trees, history of Arbor day, a beautiful wand drill, but what took the house was the violet song by 14 little girls. Our Grange exercises were rather short, but we called them good. They were in harmony with the occasion and well rendered. This is our first attempt to hold Arbor day. It was so rainy and cold that they omitted setting out the trees.—MRS. KATE WATKINS.

KENT CO.

PLEASANTON GRANGE No. 557.—Our Grange has been very drowsy, almost sleepy. But the worthy master urged upon the members the necessity of decisive action, supplemented by the appointment of a day to bring in applications for membership. The result on application day

was that the names of twelve candidates were secured for membership.

These were given the two first degrees at the last meeting, April 17. Cleon Grange No. 633 was invited to be present, to inspire us. Sister Reed, the worthy master of that Grange, is a thorough Patron and never does things by halves. She and Brother and Sister Parks, of Cleon, have our thanks for some good music. Miss Ivy Sheldon, the youngest (14 years old) member of our Grange, is our L. A. S., and fulfilled the duties of that office with honor.

The stewards were prompt and faithful. The master seemed to be the right person in the right place. Altogether we had a very enjoyable time. Our lecturer is prompt and ready with a program every meeting.—COR.

MANISTEE CO.

HESPERIA GRANGE 495 is still alive and flourishing, and enjoying immensely the new carpet and all the other requirements which go towards making Grange halls beautiful.

At our last meeting we had the Declaration of Purposes read, and a discussion of the different points ensued. One brother talked on "Specific objects." He wanted the homes made more attractive; laid particular stress on co-operation; was in favor of buying less and placing on the table nothing but what was raised on the farm. Some of the sisters thought they would like a change of diet once in a while; that it was contrary to the laws of health to eat pork and beans, eggs, etc., all the time. One brother thought we sold too much and did not buy enough for our own good.

Under the head of "education," the traveling library was discussed. One brother thought if we got it we were shouldering a great responsibility; if by accident any of the books were destroyed the Grange would become responsible. A committee was appointed to investigate the matter.

Another brother thought farmers could not afford to send their sons to the Agricultural College because it was necessary to procure a military suit costing from fifteen to twenty dollars. The poor boy that had to wear overalls did not stand a very good "show," especially when on "parade." A young brother asked if the military suit would not wear as long as any other and if the young man would not feel better with it on while on parade than if we were dressed in a pair of overalls. He would certainly look less conspicuous.

Many more ideas were advanced but this is enough at present. The meeting was full of interest.—COR.

NEWAYGO CO.

[At present the military suits cost but little if any more than does any neat suit, and wear better. They are worn as regular daily suits by many of the boys.—Ed.]

HUDSON CENTER GRANGE No. 713 was organized March 5th, 1896, by Worthy Master Horton, with 21 charter members. Starting in a neighborhood where another farmers' organization had gone to the wall a year or two before, it had hard work to get started, but we have only lost one of our charter members, and we now have 37 members and three applications.

This Grange has endeavored from the first to get all the good possible out of the Order socially, educationally and financially, and also to make our Order a lever to help lift in legislative matters. We do not know how well we have succeeded in all these things, but in a social and financial way we know we have been greatly helped.

We have been both entertained and instructed lately in our meetings by a geography class. One of the younger members draws an outline map of a state, commencing with our own of course, which is fastened to the wall where all can see it, and then the members fill in by locating and naming the large cities, rivers, etc., locating State institutions and other things of interest.

At the last meeting we conferred the first and second degrees, and also discussed the national lecturer's topic for April. We give a few of the thoughts brought out: "Parsimony is not economy." "Economize in buying by buying as near first hands as possible." "Don't leave your farm tools out in the storm; it is wasteful and looks shiftless." "Market your stock when it is ready; don't waste feed waiting for a rise." "Make your farm produce all it will." "The first 150 pounds on a hog may be produced at a good profit, the next hundred may be a dead loss." "We need silos to produce our milk economically." "Don't try to fatten ticks even if grain is cheap; dip your sheep." "Take a little advice from the women of the household occasionally."

We are prospering and hopeful, but need a hall very much and are hoping for the good times which will permit us to build one. At present we are in the second story of a cheese factory, which has answered nicely so far, but which will be crowded soon.—H. C. V.

LENAWEE CO.

FARM ECONOMY.

DISCUSSION ON APRIL TOPIC IN KALKASKA GRANGE.

The first thing to consider is our pennies, to be sure and count them before we spend them. Economize our steps. By this I do not mean for you to play Peter Tumbledown, but first plan your work, whether it be indoor or outdoor work. Before you begin, count the cost, time and labor; estimate about how much ought to be accomplished without fatigue. It is a great waste to be always tired. If the young farmer and his wife begin to walk in wisdom's ways, they have a well-grounded hope of seeing a good old age; otherwise

there is a premature old age. At fifty you will move like a man of seventy, then blame the farm life for it.

Don't fret. There is a wonderful waste of nerve power if we let things fret us. If our neighbors have a nicer house, let them enjoy it and be thankful for their comfort, not yield to the temptation to try and build before you can afford it.

It is a wonderful waste not to have the money to pay as you go. There is a waste in not having the manure pile under cover, far more than most farmers think for. A cheap shed with even a board roof is a great saving. It costs but little and soon pays for itself; any farmer than can draw a hand saw and drive a nail can build one. Then there is the woodpile; there is a continual waste in burning green wood, in fuel, fire and the housewife's temper. It costs but little to put up a half-roof woodshed.

There is great waste in feeding stock. The farmers should take note of the likes and dislikes of each animal. One will eat more of the dry, another of the succulent, and each thrives better upon the food of its choice.

There is no occupation that needs more active brain power than farming in order to succeed; more careful thought. There is no more healthful, enjoyable occupation than farming. The farmer must be in love with his calling; if not there is a waste of his time and forces. He should never go about his daily toil as under a severe task master but cheerfully, joyfully. Not only "whistle and hoe," but whistle at all work.

IS THERE A PROSPECT OF BETTER TIMES FOR THE FARMER?

Headquarters of the National Grange
of the Patrons of Husbandry.
Master's Office, Washington D.C., April 28, '97.

It is generally admitted that the farmers of the United States have been passing through a period of hard times. There are differences of opinion as to the causes which have contributed to these results, and also as to remedies. These differences were submitted to the people in the last campaign, and, in the full exercise of their sovereign power, a decision was rendered, and now, while no one is required to endorse the wisdom of the policy indicated by a majority of the voters, it is clearly the duty of every good citizen to accept the situation and strive to secure a return of prosperity along the lines indicated by the people. What is the prospect?

The President and both houses of Congress are fully awake to the importance of giving special attention to the interests of agriculture. The President has placed at the head of the Department of Agriculture a "practical farmer," who is earnestly trying to do all in his power to advance the great interest which he represents. He will be vigorously supported in his efforts by the Assistant Secretary of Agriculture, who is also a practical farmer.

With the President, Congress and Department of Agriculture all co-operating to aid the farming class, some good results may be confidently expected. "What can I do to help myself?" is the question every farmer should ask. It is a hard matter to help those who will not help themselves. Much depends upon the answer which the farmer makes to the above question. He will have his own views upon economical questions when they are under discussion in the campaign, but when settled for a term of years by the people, he should at once take steps to secure for himself and class all that belongs to him or them of right, by demanding practical legislation in accord with the policy indicated by the vote of the people.

In the matter of tariff legislation, he should now demand for agriculture adequate protection along with other industries. He should give his representatives in both houses to understand that prompt action is desired. If benefits are to be obtained under protection, they cannot come too soon. If the theory is a mistaken one, we cannot have it demonstrated too soon, in order that something else may be tried. I never knew the people of all parties so ready to try any reasonable measure that promises to ameliorate conditions. The obstructionist will have no support from the people.

The party in power is committed to the policy of international bimetalism. There are some who seem to wish to regard this as mere campaign "clap trap." Not so the people, especially the farmers. The fact that the majority of them were unwilling to try an experiment that many claimed would have unsettled values and resulted in a great financial crisis, with silver monometallism, does not, as some seem to believe, prove that they are in favor of the present monetary system or of a permanent gold standard. The people want practical bimetalism and not gold or silver monometallism. The farmer can aid in bringing about an International Conference by urging prompt action along these lines.

The party in power is committed to the policy of suppressing trusts and combines formed for the purpose of robbing the public. Let your representatives understand that no trifling will be tolerated in dealing with oppressive combinations. Ask Congress to increase the power of the Interstate Commerce Commission as requested by said Commission, to the end that the people may secure adequate protection from any abuses which now exist in the matter of transportation charges. Urge the extension of the markets for our surplus in foreign countries by treaties which will not interfere with a proper protection to American produce. Some benefit would undoubtedly accrue to the farmer along these lines of national legislation. The

farmer can also help himself by giving close attention to State legislation, but we must not expect too much from legislative enactments.

It is our business to produce sufficient for our own needs and a surplus to sell to meet other expenses. We should study conditions carefully and be governed by business principles. If we raise products for which there is little demand, or raise more of any commodity than the market will readily absorb at fair prices, we shall realize no profit and "hard times" will linger. The fact that there are those who say that "overproduction is impossible" will not help the farmer in the least. Every practical business man knows better. Excessive production in any line brings disaster to the producers. If we raise ten per cent more corn than the market will readily absorb, we knock down the price from twenty-five to thirty per cent and realize loss instead of profit on our labor. If some philanthropist would pay the freight on the surplus to India, we might give it away and then hope to realize better prices for what is left and more profit. Supply and demand, taken in the broadest sense, have always been the chief factors in regulating price and always will be, and the farmers can help themselves by recognizing this fact and governing themselves accordingly.

The people of the United States buy annually over \$100,000,000 worth of sugar from foreign countries. It is believed by many who have carefully investigated the subject that we can produce every pound of sugar needed by our people and thus save this drain upon our cash, give employment to hundreds of thousands of our people, and reduce the acreage in corn and wheat, and thus realize more cash from what we do raise because of better prices. We buy wool, eggs, barley, peas, hides and many other farm products of other countries, nearly all of which we should produce wholly on our American farms. By diversifying our crops we can help ourselves. The Department of Agriculture has furnished sugar beet seed free to thousands of farmers who will plant them and send the beets to experiment stations for analysis. In every locality where beets can be successfully grown having a fair per cent of saccharine matter, capitalists are willing to erect factories to manufacture them into sugar. Will the farmers try to help themselves by co-operating in this matter?

There always have been unreasonable persons, and I presume there always will be, whose chief delight seems to be the abuse and harsh criticism of the real workers, who, recognizing that something is wrong, are striving by reasonable and attainable methods to drive hard times from our homes and country. Organized, energetic farmers can do almost anything that is right in this country. Let us differ as we will on some questions, but by all means let us work together on practical lines for the common good.

We must not expect to reach the "top of the hill" of prosperity at one bound. It takes longer to climb the hill than it does to slide down, as everyone who has "coasted" when a boy well knows, but patient, persevering effort, if properly directed, will certainly bring its reward. J. H. BRIGHAM.
Master of the National Grange of America.

THE DUTIES OF A PATRON TO HIS GRANGE.

BROTHERS AND SISTERS:—When I joined the Grange I had my mind fixed to enjoy its privileges and meet the duties which it imposes to the extent of my ability. The Grange confers privileges upon its members and likewise imposes corresponding obligations. There is a duty devolving upon every member of the Grange. Therefore, I assume that each one has a proper solicitude for the highest success of the Grange, but let us not forget that the success depends entirely upon the earnestness, zeal and fidelity with which each one shall strive to discharge his or her duty.

We should always enter cordially and sincerely into all devotional exercises.

We should yield cheerful obedience to all our laws and rules.

We should give constant attention to all the proceedings of the Grange at all times. Great care should be observed and courtesies practiced towards the officers.

The Ritual should be more thoroughly studied by every one, so that we become more familiar with all the work of the Grange and thus be prepared to give intelligent aid to the officers when necessity requires it.

Every member should participate in the discussions of subjects which come before the Grange; for without these discussions very little interest can be maintained, although it is true that not everyone has the ability to deliver an address upon every question that may be proposed, but we should not abstain from expressing our opinions because we cannot, perhaps, do it in a certain way. It is the willingness of each member to give to the Grange what he or she knows of the subject under discussion; another duty that each member owes to the Grange is to regularly attend its meetings, which is of the highest importance, for if some stay away from the meetings it will influence others to stay away also and inflict an injury on the Grange.

Let us not forget that the Grange is what we make it, and to achieve the degree of success for which we all aspire, each one must contribute his share. Therefore, let us not forget that a good Patron places faith in God, nurtures hope, dispenses charity and is noted for fidelity.—A. F. Renner, address at Northampton county, Pa. Pomona.

ADVANTAGES OF THE GRANGE.

It is not so much what we really know as the use we make of it. The farmer feeds the world. Upon the prospects of the farmer depends the prosperity of all professions. The farming class are feeling the need of a good scientific education. With wonder and amazement we see the beautiful things of nature all about us until we all but exclaim, "What is man that all these things are for his enjoyment?" We should be advancing. Book learning is but a small part of knowledge. Knowing is a great accomplishment, but it were better not to know than to know and not do. This is a fast age and we need to keep our eyes open to the opportunities afforded us. We believe in the Grange; that it is far in advance of any other farm organization in existence and we hope within a few years to educate our young people so that they will stay on the farm with its advantages. The advantages of the Grange can scarcely be overestimated. A large attendance and a jolly good time is not all that is necessary. The literary work should seldom be curtailed for other enjoyment or pastime. With right education the home will be made more pleasant and attractive, and the farm will not be considered a dishonorable calling. The ambition of some to make the dollar in sacrifice of all else that is good and enjoyable has been detrimental to the farm life and created an opinion of industry as drudgery.—Ex.

THE GRANGE IN CANADA.

We take the following extracts from a talk by Bro. Jabel Robinson, member of executive committee of the Dominion Grange, at the last National Grange:

A short time after the formation of the National Grange, when the Order was spreading like wildfire throughout the Western States, a deputy from the National Grange, (Mr. E. Thompson), introduced the organization into Canada, with the understanding that whenever a sufficient number of Subordinate Granges should be formed they might start an independent organization, but to affiliate and fraternize with the National Grange.

On the 2d day of June, 1874, in the city of London, Ontario, the Dominion Grange was organized, and for a short time it spread rapidly. The Canadian farmers were for the first time given an opportunity to co-operate together; about one thousand Subordinate and about forty Division Granges were formed, covering a wide area, from the Bay of Fundy to the Island of Vancouver.

The delegation to the Dominion Grange consisted of one for five Subordinates. It was soon found that the traveling expenses to the annual meeting were more than the finances would bear. To meet this difficulty Provincial Granges were formed in Nova Scotia and Ontario. Finally Ontario Provincial Grange was merged into the Dominion Grange and the delegation was reduced, while Nova Scotia was given her independence, but to affiliate with the Dominion Grange.

The Dominion Grange at the present time is not large in membership, but they are still doing a grand work, the main features being education and legislation. At every annual meeting the executive officers are instructed to epitomize the work of the session and memorialize or send a deputation to the Provincial and Dominion Governments, seeking such legislation as will be in the interest of the agriculturist generally.

I am pleased to say that in many in-

stances our efforts have been rewarded with success, and many of the laws on the statute books emanated in the Grange.

The Grange of Canada undertook to do a number of things, which were in the interest of the farmers, from a financial standpoint.

1st. A company was formed for the purpose of borrowing money at a low rate of interest to loan to the members that were obliged to mortgage their farms. This scheme was not a success.

2d. A life insurance was instituted, called the Mutual Aid. This company became amalgamated with a similar institution in Massachusetts.

3d. A fire insurance company, on the mutual plan, called the Dominion Grange Fire Insurance Company, which is doing a very large and successful business in all parts of the country, under the management of R. J. Doyle, of Owen Sound.

4th. The Grange Wholesale Supply Company, on the joint stock system, was established in the city of Toronto. It is now under the management of G. W. Hambly, 126 King street, East Toronto. Our farmers find a market for their produce, while the citizens obtain fresh and pure food, the object being to give advantages to all concerned, rather than to create a large dividend to the stockholders.

5th. The Ontario People's Salt Company was established with large works at Kincardine on the East shore of Lake Huron. The company has been the means of giving salt to all farmers willing to co-operate at a trifle over cost. Several efforts have been made by the salt trust to annihilate this company, but without avail. This company is now erecting a plant at a cost of about twenty thousand dollars, for the purpose of making baking soda from salt brine, which, when made, will be sold at the lowest possible price. John Teltme, M. P., is the manager.

After accomplishing so much you will naturally inquire "why" it is that we have not more than one hundred Granges in good standing in the Dominion? It is difficult to understand all the reasons why the tillers of the soil in any country should show so much indifference to such a grand and noble organization as that of the Patrons of Husbandry. But some of the reasons given by your State Masters also apply to us. But I believe that a brighter future is dawning for the Grange. The march of intelligence is upward and onward, and our young farmers will never rest content to be ruled by other classes forever.

We certainly have the best institution ever introduced to the farming community, and I am fully confident that when all the other farmers' organizations that have sprung up in later years are only known in history, the Grange will become engrafted in the hearts of our people as well as yours, and be the means of inspiring, uplifting, ennobling and cementing into one bond of sister and brotherhood all those engaged in the pursuits of agriculture on this vast continent.

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I have heard several people complaining of hard times, but I can't understand it as I have been doing so nicely. About six months ago I took the agency for W. H. Baird & Co., Sta. A, Pittsburg, Pa., to sell their "Lightning Butter Maker" in this county. I have just done splendid with it and am making \$18 a week selling them. It is a simple arrangement and is worked very easy. You fasten it on to the kitchen table and the butter is made in three minutes. The color is nice and yellow, and then you can make much more than by the old style. All farmers recognize the advantages of the new invention, and immediately order one after seeing them work. Agents can make lots of money selling them by just showing them to the farmers' wives. They sell at a reasonable price, and anyone can make as much money as I do, and not have to work hard either. Write for particulars to Dept. Q 4 of the above company, and they will give you a start in business. A WOMAN AGENT.

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Records at Dairy Schools, 1897.

Maine.	Skim-Milk Test.	Ohio.	Skim-Milk Test.
Feb. 2.....	0.03	Jan. 15.....	0.02
" 9.....	0.04	Feb. 2.....	0.00
		" 15.....	0.02
Wisconsin.		14 tests under....	0.05
Jan 4.....	0.03		
" 5.....	0.02	Cornell.	
" 21.....	0.03	In 25 tests, Jan. 7	
New Hampshire.		to March 15.	
Feb. 18.....	0.01	8 showed only....	Trace
" 19.....	0.04	11 showed only....	0.03 to 0.05
Massachusetts.			
Feb. 10.....	0.01	Vermont.	
" 12.....	0.03	Jan. 13.....	0.01
		" 28.....	0.02
Illinois.		" 29.....	0.03
March 12.....	0.01	" 30.....	0.04
" 15.....	0.005		

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Miscellaneous.

THE OUTWITTING OF TRADDLES.

"You are from the South?"
 "Yes, ma'am, from Texas."
 "I thought so. And your experience?"
 "Has been gained in that state for the most part, although I have milled in North Carolina and Virginia. I was also engaged in the milling business a short time in Tennessee. I owned a mill there."

"But you sold the mill?"
 "Yes, that is, the sheriff sold it for me. I had saved a little money each year, after I had become sufficiently skillful in the milling business to earn something like a salary, and this money I invested as part payment on a small burr mill. I did very well for a while. Then a large roller process mill was built in my neighborhood. There was no longer a demand for my flour, and a bad year for wheat put an end very suddenly to my custom business. After that it was only a question of time when I had to give up."

"I understand. Well, Mr. —, I have forgotten your name."

"Jacob Blifkins."

"Well, Mr. Blifkins, your account of yourself is, on the whole, satisfactory, and I will say frankly that I like your appearance. You seem to me to have the qualifications which I want in a miller. You can see for yourself that my mill is small, but I have a good local and custom trade, and naturally, I wish to retain and even to increase it. Since the death of my husband, eighteen months ago, the management of the mill has fallen wholly upon me; I think as a manager I have proven a success, but I have not been able to find a miller to suit me. In this short time, I have had no less than eight millers. Some have known too much, and some too little. Each one wanted to change the mill according to his individual fancy, and if I had allowed each of them to have his way, I do not know now whether I would be the owner of a coffee mill or a brush factory. What I want is a practical miller—a miller who can enter my mill and make the most of it as it stands to-day. Understand, that I am not opposed to changes. But I do not believe that a miller who cannot make a reasonably good grade of flour with my mill as it is would be able to make any better flour after spending, I do not know how much of my money, in costly experiments. As time passes I am perfectly willing that changes should be made, if I am certain that my miller has some definite object to accomplish, and I wish to add new and improved machinery as the occasion warrants it. If we understand each other upon this point then, I shall engage you, and you may place the mill in shape and start it running to-morrow morning, or as soon after to-morrow as possible."

Jacob Blifkins was a widower of forty-two years of age. In his early life he had received a good common school education, and it was owing partly to the advice of friends, partly to the chance of his environment, that he had learned the milling business. His father had died shortly after he had left school, and burdened all at once with the responsibility of providing for a widowed mother and three small children, he did not have much time to reflect, or investigate what profession he was best fitted for. One of his father's friends, a large mill-owner, had offered him a position, and he had accepted it. He contributed regularly to the support of his mother until she married again, when he, too, married a young girl of his native town whom he had loved for several years, and with her removed to Tennessee.

He was then 27 years of age, strong, robust, very much in love with his wife, and inspired with a fierce determination to make his name stand above the average in the historic annals of milling or, at least, to make the world yield him a satisfactory stipend in return for his condescension in living in it. But causes, seemingly beyond his control, had wrecked these hopes, and diverted his energy. After his mill was sold his wife grew sick and died, and then Jacob had taken a subordinate position in one of the large flour mills of Texas. It was while here that he read one day, in a leading milling journal, the widow's advertisement for a miller, and at the time he accepted a position with her he had passed to that state where the mental equilibrium is almost proof against disturbance, where the blood flows tranquilly, and ambition concerns itself more over the thought of a good dinner than over granite monuments erected in order to perpetuate one's memory.

The next morning Jacob was at the mill at six o'clock. The widow's property consisted of a small steam power roller process mill, with a capacity of 35 barrels every 12 hours. It was located at the edge of the town in a good wheat region, and as Jacob entered the mill for the first time he felt that he was among old friends. The rolls, the spouting, the dusty floor, the cobwebbed dirty ceiling carried him back to his old burr mill in Tennessee, and suddenly his old determined, independent spirit came to him again. He felt that he was master of the situation and of himself, and with a quick expansion of the heart he threw off the weight of so many hopeless years, and felt that after all it might be worth while to live again.

With the aid of Oliver, his helper, an over-sized boy of fourteen, the mill was swept clean from top to bottom, and old

pieces of sacking, parts of broken barrels, and other odds and ends which had been left lying about as souvenirs by his predecessor were gathered together and carried to the engine room. Then Jacob went on a tour of investigation. He found that the machinery was in fairly good condition. There were some repairs that would have to be made in the spouting, and he thought it would be necessary to put new cloths on the rolls. But the rolls had been newly corrugated, and with the excellent quality of No. 1 wheat which he found in the elevator, Jacob felt that it was only a question of time when his flour should become famous. Then the inhabitants of the town and surrounding country would buy no other brands than his, and his imagination even carried him so far that he heard the little children changing the form of their morning prayer, "Give us this day Miller Blifkins' bread." It would no longer be simply bread, but the bread which they desired.

The next day the mill was started in earnest. The widow, as a shrewd and careful manager, had advertised that the mill would be started under a new and efficient management, and after the early morning hours had passed Jacob found that he had all he could do to take care of the custom trade, which had accumulated to an alarming degree during the week the mill had been idle. He had scarcely time to exchange a greeting with the widow, who came in during the morning to take charge of the office.

The first two weeks were passed in getting acquainted with his customers, and at the end of that time the business was running along very satisfactorily. One morning Jacob said to Oliver, as they were tinkering over a piece of machinery: "Oliver, who is that fat old farmer who comes to the mill so often, and who regards me so savagely?"

"Why, don't you know? That's Traddles, the widder's sooter."

"The what?"

"The widder's sooter. He's agoin' to marry her."

"You don't mean to say, Oliver, that the widow would marry that old skinkint?"

"Well, I don't know what she would or wouldn't do. He's been a pesterin' of her for jes about six months now. She needs a husband an' he's got a lot of property. An' I tell you, it takes a strong woman to stan' against the influence of property. But she's tried to discourage him, an' I know she don't love him."

"How do you know she doesn't love him?"

"I know she don't love him, because she don't love him."

"That's a boy's reason, Oliver. Give a man's reason."

"Well, she never seems to git frustrated when he's about. She never takes care to have him get a bigger grist than's given to anybody else, and one day when we was a talkin' of him, she says to me—she says to me—"

"Well, what did she say, Oliver?"

"I don't recollect her exact words, but one day when we was a talkin' of him, she says to me that whenever she looked at him, she always thought of them words of a poet, as how the mill would never grind with the water that was passed. Now what-ever did she mean by that?"

"I'm sure I haven't the slightest idea, Oliver."

"You don't know what she meant, Jacob, you're a-laffin'."

There was silence for a few moments, broken by Oliver.

"Why don't you speak for the widder yourself, Jacob?"

The miller was sobered in an instant. He looked sharply at the boy to see if he concealed any hidden meaning in his question, but to Oliver his query had seemed a natural one. "Why don't you speak for the widow yourself, Jacob?" Had he not done so? Had he not already "spoken for her" in his heart? Had not the temptation of the widow's mill commenced to urge in him the one course of action by which he might become its possessor? And what shame he felt to think how far he had yielded to that temptation. Traddles, the back number Traddles, and skinkint as well, was at least honorable. He was a man of standing in the community, and in addition to being a success, had made and kept his name respectable. While what could he urge as any legitimate reason for claiming the honor of aspiring to a marriage with the widow; a man whose past looked best when in a shadow, and whose future was kindly closed in order to conceal his blackness. No, once and for all, he must cure himself of such folly. He would put away such thoughts forever.

The weeks passed rapidly. Jacob had been at the mill for four months. The business was prosperous, and the widow informed her head miller that in the spring she should greatly increase the mill's capacity. Between her and Jacob there had sprung a very warm friendship. They were very often together, the business of the mill obliging them to pass a considerable amount of time in each other's society. And it had gradually come about that business was not the only subject of their conversation. They had long talks together when Jacob's duties would permit, on various topics. Often when the mill was closed at six o'clock, Jacob would accompany the widow to her boarding place, and to anyone excepting themselves the compatibility of their temperaments would have been seen to be growing more apparent daily. At her request he had commenced to call her by her given name of Lucy; he to her was Jacob. Under the influence of the widow's friendship Jacob was rapidly undergoing a very marked change; his heart, frozen for so many years, was becoming expansive, joyous, optimistic. He had an affectionate nature

and his heart's love-strings would have entwined about a stone wall if it could have given him, as a reward, an occasional smile. So, under the tender condence with which the widow seemed to favor him, his feelings had passed from the condition of a warm regard, into the state of a kind of adoration.

These discussions at the mill, however, were often interrupted by the indefatigable Traddles, who was still pressing his suit with ardor, and who, while not regarding Jacob in the light of a rival, was still shrewd enough to remember that the old adage "There's many a slip—" was still in operation. One morning after the widow and Jacob had finished talking over a matter of business she suddenly asked: "What do you think of marriage, Jacob?"

Jacob started involuntarily as he looked at the widow, but there was no change in the cold gray eyes, which met his steadily.

"Why, I think marriage is a good thing, Lucy."

"Yes, but between persons of my age. I know that marriage is regarded as a 'good thing' for the young, but what do you think of people who have arrived—say at your age, Jacob?"

Again the head miller started and was busying his brain to frame a reply when the widow, who had been engaged in making out a statement for the village grocer, suddenly ceased her work and continued: "Frankly, Jacob, I want your advice. Since you have been connected with the mill I have always found you to be honest and sincere, and if this subject is not exactly one that pertains to the business of the mill, it is of very great importance to me notwithstanding. My hand has been asked in marriage. When I tell you that the gentleman who has done me this great honor is no other than the wealthy farmer, who has seemed to take such delight in making the mill his home recently, it will not be necessary for me to mention his name."

"Farmer Traddles."

"Yes. He is well-to-do, and while I never heard that he killed his former wives with too much cherishing, still, at times he seems fairly good natured; and without being handsome he possesses two of the attributes in which women take a great delight, a big voice and a fine beard. He would be able to manage my mill for me, and I could make a home for us both. These last two arguments he uses very persistently in his conversation regarding our matrimonial alliance, and there may be truth in them. I am certain, for my part, that I would rather make a home for some good man I loved than spend my days wearily conning over accounts at the mill. What do you think of the farmer's offer, Jacob?"

"Very natural, and I dare say praise-worthy."

"And would you advise me to accept it?"

"That would be as your heart dictates."

"Do not say to me, Jacob, that you pretend to believe that in an affair of this kind the heart comes in for any share of consideration. Farmer Traddles wants a wife, I need a manager for my mill. What would you say of it as a business proposition?"

"I should say, by all means marry him."

"You advise me then to marry the farmer?"

"As a business proposition, yes, marry him."

"I am glad to find that we think alike on this subject, Jacob, and I have decided to do so. The happy event will not take place for some time, and even then I will have no other miller than yourself, so you need not prepare for any change. And now," said the widow, extending her hand, and at the same time regarding her head miller with a rather curious expression, "you may wish me joy, Jacob."

"I wish you joy, Lucy."

Jacob passed from the office into the mill. Outside the sun was shining brightly, but it seemed suddenly to have lost its luster as though the day had commenced to fall. There was an awful stillness in the mill, and he could hear the beating of his heart above the dull noise of the grinding machinery. He went about his duties mechanically, and somehow it seemed to him that, for the second time, his life had suffered a shipwreck. He tried to fix his attention upon his work, but in spite of his attempted application the thought of the widow's approaching marriage confronted him like a specter. He saw that he had allowed his affections to entwine, like golden cords, upon an inflated sphere, and it had suddenly collapsed and left him falling, he knew not whither. He made an effort to pull himself together, yet he was forced to acknowledge to himself that when he should become a homeless wanderer again he would leave his heart in the old mill. For he had already decided that he would not operate the mill under the management of his successful rival, the skinkint Traddles.

The next morning the farmer came to the mill bland and smiling. He openly ordered Oliver about, and patronized Jacob, to whom he said, in a burst of confidence: "I dare say we'll do fine when I'm boss here, eh, Jacob, my boy?"

"I have resigned my position, Mr. Traddles, and shall leave at the end of the month." "Well, well, we'll be sorry to lose you, Jacob, we'll be sorry to lose you, but there's as good fish in the sea as ever were caught, eh, Jacob?"

"And you can get your hook into some very respectable swimmers in the streams hereabout, Mr. Traddles."

"That may be true too, Jacob, but I have not seen any of your pictures on any medals yet," and the farmer laughed uproariously at this witty reply. The head miller, however, had retreated to another part of the building and was beyond hearing.

The end of the month came, and with it Jacob's preparations for his departure. He had found time for very little conversation

with the widow, who seemed more kind to him than usual, and who expressed to him more than once her certainty of being unable to fill the place of her departing head miller. On the last afternoon of his stay he had been explaining to Traddles and to Oliver some details in the working of the machinery, as they were to take charge of the mill until the installation of a new miller. His instructions finished, he went to the office to secure the few effects that belonged to him, and to say farewell to the widow. Traddles and Oliver awaited his re-appearance. Five minutes passed, then ten, fifteen, twenty. There was no Jacob. At last the farmer and Oliver, inspired with the same thought, left their position behind the rolls and came out in full view of the office. At the sight the farmer ground his teeth. To Traddles and to Oliver it might have seemed that they had been ushered into a theater just before the fall of the curtain on the last act of a twenty-minute drama. The two principal actors in the scene were standing directly in the center of the office. The widow's head was nestled close against Jacob's broad shoulder, regardless of his dusty coat, and both his arms encircled her.

"Pears as though you wasn't in it, Traddles," said Oliver.—*American Miller.*

ABOUT four years ago a Republican in a Western town, who kept a general store, helped his wife, who is a strong Democrat, to get the appointment as postmaster. The office was in his store, of course, and naturally stimulated trade. But as a Republican is now likely to be appointed in her place, the husband thinks he might as well be that Republican, and so he has written a letter to his Congressman, in which he says: "I suppose there will be several applicants for the postoffice here. I think that a change here should be made at once. I have nothing to say against the character of the present incumbent and no charges to make against her. But, George, as you well know, she is one of the most bitter Democrats in this country. She talked and worked for Bryan so openly and persistently that I think it would be well to have her fired at once, and I want the place. I don't send you a petition in my behalf because the folks here don't seem to think it would be proper, under all the circumstances. I rely on our old friendship to secure your hearty indorsement."

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The Dairy.

For the Michigan Farmer.

NOTES AND COMMENTS.

It is interesting to notice how some men will utilize what others throw away. One man will mow a field of sorrel and keep his flock in fair condition on the hay. Another will take the culls which a neighbor thinks not worth keeping and raise up a herd to surpass that neighbor's high-priced, pedigreed stock. To go over some of these small farms is a school of itself in the way of adapting unfavorable means to useful ends.

Last winter we had an opportunity for examining a cow stable that was made of material which had cost very little, and as the owner was his own carpenter the whole expense had been reduced to a minimum. An old building had been bought, and when torn down it furnished the greater part of the material, to which were added boards from old machinery, fences and boxes, the whole making a serviceable stable, though it could hardly be called artistic.

By making the walls double and padding with straw the stable was made warm. The roof was made of boards, which answered the purpose as well or better than a cheap grade of shingles.

The building was only high enough for a man to stand erect. There was no loft, and none needed, as the stalks were cut before feeding and other feeders were all readily handled from the main barn which was easy of access.

The floor of the stalls consisted of packed clay, with a wide plank for the hind feet of the animals. This, we were assured, made the best kind of floor, and was easy to keep in repair. The firm clay made a good gutter for holdings the liquids, and when kept filled with absorbents it did not get cut up by the hoofs of the animals.

Perhaps it will be said that such buildings are not rare enough to attract much attention. That may be admitted, but it is also true that they are mostly makeshifts which are tolerated only because of necessity, and do not show in their construction that attention to detail which means comfort for the animals and convenience in caring for them. A better barn may be expected in time, but it may be doubted if the sleek-looking Jerseys will fare better or give richer milk than in their present comfortable quarters.

Of all the uses to which skimmed milk can be put, the one which has surprised us most was to find it substituted for grain in a horse's ration.

It was a family horse, kept with a single cow on a village lot. Usually a convenient pig was at hand for turning to account the extra milk, but as this animal was lacking during one winter, the horse was taken into the partnership, much to his delight.

There was no wasted milk. The horse would drink a pailful twice a day if he could get it. Sweet or sour, or it might be half buttermilk, it was all alike eagerly swallowed by the horse. If this food did not serve him as well as grain, he at least did not show it, for he looked as well and traveled as easily as though receiving his quota of oats. Perhaps there is no reason why he should not.

The food properties of milk are such as a driving horse should need, and they are furnished in a digestible form, which is evidently agreeable to the animal.

Perhaps this kind of food would not be relished by all horses, it may not be by the majority, but in this instance it was found profitable to feed milk to the horse rather than fatten a pig and buy grain. How extensively this might be practiced, others may be able to tell from experience.

A farmer was noticed to dust the back of the necks of his cattle when he fed them. This, he said, was to keep them free from lice. The theory was that as the insects come upon the necks first the cows, in licking off the meal, destroy the pests and their eggs. Whatever there may be in this, his animals were kept clean of vermin. It might assist as a preventive, and yet be of little value as a cure. At least it is a treatment easy of application.

The dehorning process still finds opponents, on the grounds of cruelty, among those who do not recognize the difference between the old method and the new. To tie an animal down and saw off the horns is a form of torture which cannot be too strongly condemned, and should be a last resort.

But when the improved implements are used, which clip a horn with a motion of the hand, the operation seems to be accompanied with little pain if any at all. At least when properly done the animal at once begins feeding as though nothing worth noticing had happened, which would not be the case were there much pain.

A man who has been troubled with cross or vicious cows is easily convinced of the advantages of dehorning, and once tried the practice is continued.

R. D. W.

It encourages many a poor farmer who wishes to keep cows, but has no fine stables, to read about the methods followed so successfully by other poor farmers.

Our own stables are "fixed up" in about the same way our friend describes above. The expense was very little and the cows are just as comfortable and do as well as they would in a costly barn. It is more inconvenient to feed them than it would be

could we have everything just as we would like to plan it.

For three years we have used a bay horse, now 18 years old, weighing about 1200 lbs., to walk on the tread power every morning from one to two hours. This horse skims the milk, does the churning, and delivers the butter to customers in Battle Creek.

He is not only a good "dairy" horse, and an expert in his line, but he will drink all the skim milk, buttermilk, and even swill, that he can get his nose into. We know that fresh skim milk is good for him and shall let him have more of it in the future. This horse is in excellent condition, and the tread power, with skim milk accompaniment, seems to make him improve with age. Fact.—Ed.]

BUTTER-MAKING IN ENGLAND.

From our Special English Correspondent.

In two west of England counties, Devon and Cornwall, where butter is largely produced, the system adopted is peculiar to the district, and a brief description will interest your readers. The milk is placed in pans somewhat deeper than the ordinary shallow milk pan, and after remaining from 12 to 24 hours, according to the season, is scalded to a temperature of from 160 to 170 degrees Fahr. The pans are then returned to the dairy, where they remain for a similar period, in which the cream is removed and stirred into butter with the hand. We should search in vain in any civilized country where dairy work is popular for any such primitive process, but our western people adhere to it with tenacity, and are not only able to find arguments to support it, but they are capable of distorting experiments—which prove it to be about the worst possible method—in its favor. Some experiments have recently been concluded by the committee of the Devon County Council with the object of comparing this method of butter manufacture, and we refer to them in some detail because of the important facts which are incidentally brought out. The methods tested were the following:

1. The Devon method described above.
2. Cream produced on the Devon method, but converted into butter in a churn.
3. Cream produced in the ordinary shallow setting pan and churned.
4. Separated cream churned.
5. Separated cream scalded and churned.

There are not very few of us in this country who would not very quickly decide—and without experiment—which of these practices to follow for the production of the finest possible sample, or on the other hand, for the production of the greatest quantity of butter from a given quantity of milk, and there is probably not one expert in a hundred who would dream of selecting the primitive Devonshire system in its entirety, quite apart from the fact that the stirring of cream with the hand is in every sense of the word objectionable.

The milk employed was of good quality, containing 3.65 per cent of fat. After mixing well it was divided into eighteen lots of 200 lbs. each, about 30 gallons; six lots were employed for butter-making under the primitive Devonshire method, while three lots were handed over to persons to convert into butter under each of the four remaining systems. The separated cream was obtained from the milk by the Alpha Laval machine. The time occupied in churning the various butters averaged 37 minutes, against 45 minutes occupied in the process of stirring the cream with the hand. There can scarcely be any two opinions among those who are experienced as to which process yielded the greatest amount of butter. The figures, however, are given in the order of the quantity produced: Separated cream, 8 pounds butter; ditto scalded, 7 pounds 13½ ounces; Devon method, 7 pounds 10½ ounces; scalded cream churned, 6 pounds 15 ounces; shallow pan cream, 6 pounds 7 ounces.

Naturally the separator takes the best position, but that position relatively to the Devonshire plan is much better than it appears, for in the Devonshire butter—which stands third in weight—there was 16.7 per cent of water and 1.1 per cent of curdy matter, against 12.6 and 11.9 per cent of water and .5 per cent of curdy matter in the two separated cream butters. The shallow pan cream also produced butter containing an equally small quantity of water and curdy matter, while the churned scalded cream, although equally free from curd, contained 13.8 of water. From the point of view of quantity, therefore, the Devon method was beaten by these separators, whereas from the point of view of quality it was beaten by every process. It was, however, reserved for the sub-committee to point out that, although the quantity of butter obtained was smaller than that obtained by the separator, yet the superior value of the Devon skimmed milk was sufficient to make up the difference. If this means anything, it means that for calf or pig feeding it pays to leave butter, worth here to-day 24c. to 30c. per pound, in milk, instead of removing the whole of it and replacing it with a cheaper fat of equal stock-feeding value. We cannot, however, admit that butter containing an excess of curd and water is of equal value with that which is normal.

To a Devon man, butter made upon any other system than his own is distasteful; to an outsider visiting Devon, butter made on this system is strange, but there are plenty of men who are judges, and who can discriminate with ease. It is noteworthy that in this case two London analysts were employed, both of whom have had experience with butter. The samples were sent to them for examination at the

end of a week and at the end of a fortnight, and in their judgment—and they agreed completely—while finding that the butter produced from the scalded cream kept better than that produced from the raw cream, they preferred the butter produced from the churned scalded cream and the separated scalded cream to either the butter produced from raw cream or the Devon method. The experience of these gentlemen—chemists though they are—is probably incomparably greater than that of the Devonport butter merchant. But what did the other judges say? The Devonport judge reported that at the end of fourteen days the three samples of scalded separated cream were "very strong," "strong" and "strong." On the other hand, a Mr. Jackson, of Birmingham, whose experience is probably national if not international, reported one that it had kept well and was only just turning, and that the other two were quite sweet. Another Exeter judge, in support of the Birmingham judge, reported of one butter that it was "still in perfect condition," that another was "medium," and that the third was "off taste." In addition, two other judges were selected, one from London and the other from Devonport, but the London judge made no report whatever, and the Devonport judge could not agree with the other two. But although two were fully agreed, the sub-committee of the county council—and they were six in number—awarded all the prizes to the six samples of butter made on the complete Devon system, in accordance with the decision of the Devonport judge.

The matter so far ends, but it lets your readers see the exact position of a certain section of the farming community here in England. We are certainly concerned that in connection with a national industry the enormous efforts which have been made in the direction of improvement should be ridiculed by the award of prizes to a system which is not only inferior, but in which the hand—which every student is taught to avoid using—is actually introduced into the cream, and at the same time that the sympathies of the ignorant are raised against modern technical instruction. There is, however, a point which applies to the whole of the agricultural world. Is butter produced from scalded cream superior to that produced from raw cream? Whatever may have been the case in this instance, we take it to have been abnormal. Good butter can unquestionably be produced in this way, but the finest samples which we have ever seen upon exhibition or upon the table, have always been the product of raw cream, but of cream obtained without the aid of the separator. We admit that for the sake of economy the separator is essential in these days, and that the loss by setting milk in shallow vessels is too considerable to be ignored, but no cream is superior to that produced in shallow vessels under the best conditions and especially in spring and autumn, with the result that no butter contains finer flavor. In this case cream-raising by gravitation on the pans was handicapped by the temperature of the atmosphere, and that fact cannot be ignored; if, however, any of your readers have any doubt about the matter, it may be well for them to make the experiment for themselves and to ascertain whether scalding will or will not enable them to obtain better prices for their butter than they are receiving at the present time.

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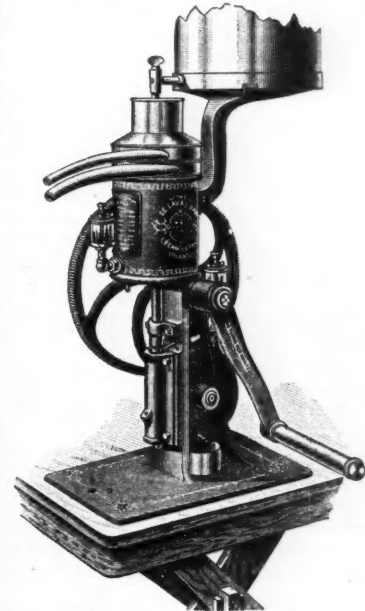
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DETROIT, SATURDAY, MAY 8, 1897.

This paper is entered at the Detroit Postoffice as second class matter.

THE WOOL SCHEDULE AS REPORTED TO THE SENATE.

On Tuesday last the new tariff bill was reported to the Senate by its Finance committee. It is greatly changed since it left the House, and in no other respect have the changes been so great as in the wool schedule. While the reports so far received are only telegraphic dispatches, and may, to some extent, be erroneous, it is quite apparent that the interest of the wool-grower has been deliberately sacrificed to that of the manufacturer. The dispatches say:

First-class wools were reduced from eleven cents per pound, as provided in the house bill, to eight cents per pound, and second-class wools from twelve to nine cents, whereas the duties of wools of the third-class were raised. The dividing line in this latter class was placed at ten cents value, wools under that value being made dutiable at the rate of four cents per pound instead of 32 per cent ad valorem, as in the house bill. Wools valued at more than ten cents per pound were placed at seven cents per pound, instead of 50 per cent ad valorem. The wool growers failed to secure all the changes which they desired in classification, but it is understood that the rates fixed on the wools themselves are satisfactory to them.

Skirted wools of the first class as imported in 1890 and prior to that date, required to pay one cent per pound in addition to the rates imposed by this act on unwashed wools of class one. There is a reduction on wools from thirty to twenty cents per pound.

Paragraphs 362 and 363 and 364 are all stricken out and substitutes provided for them, as follows:

362—Wool and hair, which have been advanced by any process of manufacture beyond the washed or scoured condition not specially provided for in this act, shall be subject to the same duties as are imposed upon manufactures of wool not specially provided for.

The provisions quoted regarding wool are simply iniquitous.

First-class wools include the following: Merino, mestiza, metz, or metis wools, or other wools of Merino blood, immediate or remote, Down clothing wool, and wools of like character with any of the preceding, including Bagdad wool, China lamb's wool, Castel Branco, Adrianople skin wool or butcher's wool, and such as have been heretofore usually imported into the United States from Buenos Ayres, New Zealand, Australia, Cape of Good Hope, Russia, Great Britain, Canada, Egypt, Morocco and elsewhere, and all wools not herein-after included in classes two and three.

Class two includes Leicester, Cotswold, Lincolnshire, Down combing wools, Canada long wools, or other like combing wools of English blood, and usually known by the terms herein used, and also hair of the camel, Angora goat, alpaca and other like animals.

Class three includes Donskol, native South American, Cordova, Valparaiso, native Smyrna, Russian camel's hair, and including wools of like character, such as have been heretofore usually imported into the United States from Turkey, Greece, Syria and elsewhere, excepting improved wools hereinafter provided for.

Now under the provisions incorporated by the Senate committee, first-class wools

are to pay a duty of eight cents, but skirted fleeces are admitted by paying one cent per pound additional, or nine cents. These skirted fleeces, as shown in the FARMER, are really as clean as ordinary washed fleeces, and already sorted. As compared with unwashed American fleeces, with which they come in competition, the duty will not be more than six cents at the outside. Thus, third-class wool costing above 10 cents is to have a protective duty of seven cents, while the choicest wools grown are only to have a duty of six. This is evidently done at the suggestion of manufacturers for two reasons: First, to get the finest wools at a low duty rate. Second, to drive the American wool-grower into the production of low grade wool by paying him a bounty to do so, and finally making true the contention of manufacturers that no choice fine wools can be grown in the United States. Then they can ask that it be admitted free.

If that schedule is passed in its present shape it will be just as bad for American wool-growers as if the duty on unwashed wool was six cents, while the manufacturer gets compensatory duties doubled and trebled on his goods at the full duty rate of eight cents.

There is one thing certain, and that is this schedule was arranged in deference to the gang of lobbyists maintained by eastern manufacturers at the capital, aided by Senator Aldrich, of Rhode Island, who is as narrow as his state, and as bigoted against western interests as a New York capitalist. Then the Finance committee selected as its "expert," S. N. D. North, who is also secretary of the National Association of Wool Manufacturers, and its lobbyist. Thus he was always on hand to whisper suggestions into the ears of the Finance committee, and controvert the statements made in the interests of the wool-growers, while drawing pay as "expert" of the committee and of an association comprising the bitterest enemies of the wool-growers. This is an outrage that should condemn the wool schedule unheard.

Then the wool-growers have not a man on the Finance committee who understands the first thing about their interests. Neither is there a single member of the Senate who has any practical knowledge of wools, and they are, therefore, compelled to accept the statements of the most consistent liars as to their grade and value. It is plain the wool-growers are to be sold out, after all the high-sounding promises of the Republican platform, and the great anxiety expressed to do something for the agricultural interests.

HE WANTS FREE SEEDS.

To the Editor of the Michigan Farmer.

I see quite a discussion is going on through the columns of our agricultural papers about the free seed business, and I would like to ask one question in regard to it. Some time ago I saw by the papers that D. M. Ferry & Co. had asked for a writ to stop this business, saying it damaged their business—I think it was \$20,000. Now if this one firm was damaged that much, how about the rest of the firms all over this broad land of ours? Certainly someone must get some seeds. One man says he got five cents' worth. I for one get a good lot every year, and I don't think a man has to look very close at these discussions to see that they are wholly in favor of the seed firms, and, like every other law, grind down the farmer. He is getting rich too fast. Put up his taxes, take away his privileges, keep him down, he has no rights. One writer says it burdens the mails with tons of useless matter. What are the mails for if not to help the public? I for one say, let the good work go on.

HILLSDALE CO., MICH.

R. O. HUMPHREY.

Mr. Humphrey appears to think that if D. M. Ferry & Co., and other seed firms, lose \$20,000 annually through the free distribution of seeds, the farmers profit to that extent. But the fact is that these firms lose through the government making contracts with other firms to furnish seeds, for which it pays out of the revenues of the government. Simply because the big seed firms lose through this system is not an argument for its continuance; that should depend upon its justice and value.

Our correspondent says he gets a good lot of seeds every year. If he does, there are ten farmers in his neighborhood who do not get any. How are they benefited? Yet they must help pay the expense. If all farmers shared alike in the distribution it would not be so unfair. But to do this the amount distributed would have to be increased to fifty times the present amount. And it is the farmers who most need them that get none. The poorest class of

farmers have no influence politically or socially, so while some of the others get seeds they get nothing. It is a bonus to the few at the expense of the many.

MURDERS IN CUBA AND THE UNITED STATES.

Senator Morgan has again been insisting that the Senate should take up his resolutions recognizing the Cuban insurgents belligerents, and according them rights and privileges as such. In the course of a long address he painted in lurid colors the horrors of the present war in Cuba, and the cruelties practiced by Gen. Weyler and his soldiers. While the Senator may have exaggerated a little in his statements, there is no doubt but that the condition of affairs in that unhappy island is a disgrace to the Spanish government. Just how the United States government can interfere in the affairs of Cuba, beyond affording the most ample protection to her own citizens, is something we cannot figure out. In the past week, according to the dispatches of the associated press, seven negroes, three of them boys from 13 to 15 years of age, have been openly murdered in the section from which Mr. Morgan comes. Six of these were accused of crimes, and at once hung to neighboring trees without judge or jury. The other, in an adjoining state, was found near a levee, and, as the dispatch stated, could not answer questions put to him satisfactorily, so he was shot. Could Gen. Weyler and his soldiers treat the Cubans worse than these American citizens were treated? Yet neither Mr. Morgan, nor anyone else, utters a protest. Should not Spain draft a note to our government calling attention to these horrible atrocities? Would it not be well before we start to lecture other nations upon the treatment given their citizens, that we should candidly consider if our own government is not equally guilty in allowing its citizens to be murdered in cold blood, without form of law, in a time of peace? Had we not better try to reform ourselves before we start on others? We call the attention of Mr. Morgan to these recent instances of outrageous disregard of law, and the perpetration of atrocities only equalled by savages, and ask his aid in putting a stop to them and punishing the authors. Let us leave to the Spanish government the regulation of its own domestic affairs until our own government has shown its ability to enforce the laws for the protection of its citizens. We have enough to do at home.

EXPERIMENT STATION BULLETINS.

A committee representing the Association of American Agricultural Colleges and Experiment Stations, are sending out a circular letter, a copy of which has been sent to this office, which contains the following:

"At the last convention of the Association of American Agricultural Colleges and Experiment Stations a standing committee of five on nomenclature was provided for. It is the duty of this committee to recommend to the Association such action as, in its judgment, will tend to promote uniformity and simplicity in the nomenclature used in station publications.

"In planning its work, the committee has not felt it desirable to search for work, but is to take up such matters as are brought to its attention. With this end in view, it has been thought best to ask station workers and others interested to communicate to the chairman of the committee any suggestions which they may desire to offer regarding the nomenclature of station publications. In particular, the committee desires to have its attention called to any cases where diversity in usage among different stations is likely to produce confusion in the mind of the non-professional reader."

The association can do a good work in this direction, but a much more important one if it will urge upon the faculties of colleges and directors of experiment stations the necessity of using the simple English terms in their bulletins, so that they may be understood by everyone. Some of the bulletins read as if the parties preparing them were more anxious to display their knowledge of Latin and acquaintance with high sounding and but little used English words, than to convey information. There has been considerable improvement in this respect within the past ten years, but it can be extended further without injury to the reputation of the professors and to the great advantage of the farmer and horticulturist. The entomologists, especially those connected with experiment stations, have wisely discarded a great many technical terms in their bulletins, and give popular as well as scientific names to the vari-

ous insects they write about. It should always be borne in mind that such bulletins are primarily intended to give information upon the subjects treated, not to furnish an opportunity for a display of the wonderful knowledge of the writers. The value of the bulletins could be greatly increased by keeping this fact in mind, and thus rendering it unnecessary for plain people to consult a Latin or English dictionary, or a treatise on botany, before they can understand what these bulletins mean.

For the Michigan Farmer.

RENTING FARMS.

I have been hoping to see some discussion in the FARMER relative to methods of renting farms, as was proposed a few weeks since. I have a good farm, and being a woman I cannot farm it without considerable worry and expense, so have thought of renting or selling, but cannot bring myself to consent to rent it and have it run down as many, or most rented farms are, in my vicinity. I do not believe in shiftless, careless farming; I think that habit and store-bills are at the bottom of farmers' troubles mostly.

Hope to hear from others on the subject of renting.

How do the readers of the FARMER like the idea advanced in April 24th issue of carrying the stove-pipe through the wall and ceiling into main chimney? We formerly had some such an arrangement, but the heat overhead was too much, and headaches and cold feet were common. After a change of stove to do away with overhead pipe, we noticed much improvement in sanitary respects.

MRS. I. JENNEY.

[The great desideratum in renting a farm is to secure a tenant who will maintain the improvements and its fertility during his occupancy. The question of money rent, or a part of the crop as payment of the rent, is a secondary consideration to this one. But the tenant who will care for a farm as well as the owner, generally has a farm of his own. The renter is frequently one who has lost his farm because of mismanagement. This is not always so, but too often the case. The best tenant is the young, ambitious man, who is striving to better his condition, and rents until he is able to buy. He may make mistakes in judgment, but his energy will atone for them. Such a tenant can only be secured by offering good advantages, and leasing for a term of years. The tenant who only holds his place from year to year is at a great disadvantage, for every dollar expended in a direction which will not give immediate returns is a dead loss. He is practically compelled to skin the land so as to get all he can for the year he occupied it. On a farm which he is to control, under the terms of the agreement, for a term of years, he knows it will be to his advantage to maintain and improve from year to year. If the lease carries a provision that he has the privilege of purchase at a certain price per acre at the expiration of the lease, say seven or ten years, then the chances for the tenant and the landlord both securing good returns will be greatly increased. To succeed in any business there must be some hope of reward for the labor and time expended in carrying it on. There can be very little for the yearly renter to look forward to. If he does well, he has generally to meet a heavier rental the second year, or perhaps is underbid by some other party, and whatever work he has done with the hope of future profit is lost to him, and the benefit goes to his successor.

We have watched the returns from several rented farms in Wayne County, and nearly invariably they decrease from year to year. They are always rented for short terms, and as the farms run down the class of farmers who will rent them runs down also.

This renting problem is a difficult problem to solve so that the owner and renter will receive equal justice, and the farm be properly cared for. The position of our correspondent makes the question one of great importance to her, and she should be well acquainted with a man before she rents him her farm, not only as to his ability to carry it on, but also as to his integrity and reputation for fair dealing. There are many good men who would be willing to rent farms at a fair price, but they must have the opportunity to reap the reward for their skill and labor which they are honestly entitled to, and this they can never secure if their term of occupancy is limited to one or two years. We don't pretend to be able to furnish a basis for the proper solution of the many questions of rights and equities which much necessarily come up between landlord and tenant, but we feel certain a discussion of the subject would do much to clear up difficulties and enable each side to better understand its duties and rights, and, to this extent, simplify the problem and aid in its solution.

LETTER FROM THE UPPER PENINSULA.

To the Editor of the Michigan Farmer.

Let me assure you that I feel truly grateful for the quick response you have so kindly made to my letter of inquiry regarding the construction of a post barn, and I feel that I am more than fortunate in having become a subscriber to your paper, the MICHIGAN FARMER, for in this one instance your description of a post barn will repay a life's subscription to your valuable paper.

With regard to an experiment station in the upper peninsula, I can safely say that your sentiments will meet with a general approval, and if some of our speakers from the upper part of Michigan would get in line, it might be one of the possibilities of the near future.

Speaking of the different crops that are nearly always a success in this section I will mention fall wheat and spring wheat, both of which do well here, and will, under fairly favorable conditions, yield from twenty to forty bushels per acre, although there are a few instances of as high as fifty bushels per acre. Peas average, in this neighborhood, a yield of 35 to 50 bushels, the latter being for the last three years a common yield. I refer to Canadian field peas. Oats also do well, and fall rye. Corn is not grown to any extent, except on some of the lighter soils, as it is considered non-paying, and is supplanted largely by field peas. Timothy, alsike clover and red top grow in abundance. A great many are experimenting with fruit—apples mainly, with some plums and cherries—with what success is yet to be determined.

I am somewhat at a loss in trying to convey to you an approximate idea of the farming element in this county. At the time of which you speak there were not one-tenth of the settlers that there are today. Rudyard township was entirely unsettled, but is to-day forging ahead, and may become the banner township of the county. Your idea of the soil is about right.

J. A. M.
STRONGVILLE, CHIPPEWA CO., MICH.

The above letter was not intended for publication, but we have taken the privilege of giving it to our readers to show what is being done by the agriculturists of the upper peninsula. The statement regarding the crops found most profitable there, is of much interest to those who have been studying out the future of that large portion of the State north of the Straits of Mackinac and south of Lake Superior. It would puzzle farmers in the southern peninsula to get along without the corn crop, the grandest crop that can be grown where climatic conditions are favorable. But the field pea, oats and rye, pre-eminently crops for a cool climate, are used as substitutes for corn, and answer admirably. We have also seen some excellent potatoes, turnips, and other vegetables, from Chippewa county, to say nothing of very fine celery. Its possibilities for certain fruits are yet to be determined, but we believe the strawberry, raspberry, blackberry, gooseberry and currant can be grown, hardy varieties being selected. It must be remembered, when considering natural conditions, that although the winters are long and the cold more intense than in southern Michigan, snow falls so early and remains upon the ground so steadily until spring, that plants are better protected than, at first thought, would be deemed possible. Some seasons the grass will remain green under the snow all winter, and the moment the snow is off everything grows with wonderful rapidity. We have heard several declare that there were fewer failures with fall wheat than in central Michigan, from the fact that it is so well protected by the snow.

It is to help forward the development of this section that we have urged the passage of the bill now before the legislature for an experiment station in the upper peninsula. It is an important portion of the State, and its well-being and advancement should be aided in every way possible by all good citizens.

The following extract from the *Wool and Cotton Reporter* explains the "true inwardness" of the changes made by the Senate in the wool schedule, and places Mr. North and the committee in their true light after posing as avowed friends of the wool-grower:

"One cause of intense irritation to the wool-growers is the fact that S. N. D. North is in the employ of the Senate Finance Committee as an 'expert,' and that through him the Finance Committee is practically in the hands of William Whitman, of Boston, and James Dobson, of Philadelphia, and executes the will of these two gentlemen, while holding the wool-growers at arm's length, and refusing them a hearing. Hence the farmers throughout the United States are asserting that the Senate Finance Committee is owned by one or two large contributors to recent campaign funds, and this assertion is beginning to cause a reaction against the very interests which Mr. North represents."

It has been nearly impossible for representatives of the wool-growers to obtain a

hearing. Hon. John T. Rich did, and made a good impression. S. N. D. North sat and heard it all, and could then controvert his arguments at leisure, and in a manner to completely efface them with men who would hardly know a sheep from a goat, or could hardly tell a lock of fleece wool from cotton. We think we can now appreciate Mr. North's assertions of friendship for wool-growers, made recently in these columns, at their true value.

STORING WOOL.

To the Editor of the Michigan Farmer.

Suppose we decide to hold our wool, according to suggestion in last FARMER, what precautions need be taken in order to have it in good condition eight months or a year hence? Is there danger of packing or covering too closely? INQUIRER.

The general place to store wool for a short time is an empty granary, and any place which will give the same conditions as a granary will be all right. It will not pack too close if the fleeces are simply piled on each other in layers. Over the whole there should be a piece of canvas or sheeting to keep out dust or chaff. It does not want to be too close, but dry and rather dark. Open the room or place where stored for a free circulation of air when it begins to smell close and woolly.

TO STOP IMPORTATIONS OF ADULTERATED TEAS.

The Secretary of the Treasury has issued a series of regulations to prevent the importation of spurious and adulterated teas. These regulations he says have been established, by advice of a Board of Tea Experts appointed by him. The following are the standards of teas to which all importations must positively conform:

- No. 1—Formosa Oolong.
- No. 2—Fochow Oolong.
- No. 3—Amoy Oolong.
- No. 4—North China Congou.
- No. 5—South China Congou.
- No. 6—India tea.
- No. 7—Ceylon tea.

In each of the above standards the maximum percentage of dust or fannings must be restricted to 10 per cent when sifted through a No. 16 sieve, made of No. 26 brass wire, inasmuch as any excess over this percentage of dust or fanning is liable to be made up of extraneous matter.

No. 8—Pingsuey green tea.

As this standard is of better make or style than was necessary to represent the quality of infusion, the rule must be specially emphasized to examine with reference to liquor and infused leaf only.

- No. 9—(a) Country green tea.
- No. 10—(b) Country green tea.
- No. 11—Japan tea, pan-dried.
- No. 12—Japan tea, sun-dried.
- No. 13—Japan tea, basket-dried.

Maximum percentage of dust or fannings not to exceed 1 per cent, when sifted through a No. 30 sieve, made of brass wire No. 31.

- No. 14—Japan tea dust or fannings.
- No. 15—Scented Orange Pekoe.
- No. 16—Capers.

The new regulations will go into effect at once.

Secretary Gage announces that for the time being qualified examiners will be established only at New York, San Francisco and Chicago, where all invoices of tea must be examined.

"The new regulations will be a mighty good thing for honest importers and a mighty bad thing for dishonest importers," said deputy collector of New York. "They will, I think, put an end to importations of spurious tea." If so, we will have so much to be thankful for, and if the Pure Food Commissions in the various States do their work efficiently we will soon drink pure teas instead of decoctions of dried leaves of other plants.

THE WHEAT CROP IN GREAT BRITAIN AND EUROPE.

The *Mark Lane Express* of Monday last, in its weekly review of the British grain trade, has this to say regarding the wheat crop in Great Britain and on the continent:

"The wheat in Great Britain is irregular and off color, and it is not thought it can come up to an average crop even with a fine summer. It is certain the barley crop is below the average, but the weather has suited oats."

"Only a preliminary estimate of the wheat crop in France of 37,500,000 quarters has been made. It shows that the yield is likely to be the smallest since 1894. We must, therefore, be prepared to find France a strong competitive buyer from September, instead of, as in the past two years, a small buyer of Russian and American wheat and an exporter of flour to the United Kingdom."

"In Germany, Austria, Italy and Spain the agricultural outlook is satisfactory. Russia promises an average crop. The fall in the price of oats warns farmers that the acreage is overdone, and that competition between Russia and America will be formidable, with low freight rates from these countries."

Ex-Gov. ALBERT G. PORTER, of Indiana, died at his home in Indianapolis last Monday morning. He was 74 years old and has been confined to the house for nearly two years. His death was caused by paresis. He served as minister to Italy during the Harrison administration.

NEWS SUMMARY.

Michigan.

Andrew J. Smith, ex-attorney general of the State, died at his home in Cassopolis last Monday morning. Judge Smith was nearly 80 years old.

Bronson farmers are preparing to test the sugar beet as a crop for that section. If the experiments are satisfactory a factory will be built at Bronson.

President Lewis R. Fiske, of Albion college, has offered his resignation, to take effect when a suitable successor can be secured. He has been president 20 years.

Gaylord is to have a flax mill, and the construction of the building is now under way. About 200 acres of flax will be raised by the farmers of the vicinity this season.

A report from Leslie states that the buds on apple, peach and plum trees are badly infested with insects, the damp weather appearing to make the pests unusually numerous.

Benton Harbor fruit-growers have been much aroused by the discovery of San Jose scale on a consignment of trees recently arriving there from an eastern nursery. It is feared the pest may gain a foothold.

The grain elevator at Oak Grove was burned last week. It contained 2,000 bushels of beans, 1,500 bushels of wheat and smaller quantities of cloverseed and rye. Total loss exceeds \$5,000. It will be rebuilt.

R. D. Scott & Co., owners of the large buggy works at Pontiac, are talking of doubling the capacity of the works, as they are at present crowded. This enlargement would give employment to several hundred men.

Two sharpers who worked the bean swindle on a few trusting farmers of Jackson county are now in jail and will be prosecuted by the county. It is claimed that they obtained at least a carload of beans without paying a cent for them.

Frank Ashley, who was sent to Jackson to serve a life sentence for killing James Magee in Detroit last summer, attempted to commit suicide last Monday night by severing an artery in his arm. He was very faint from loss of blood when found, but will probably recover.

The Consolidated Rail Joint Co., of Chicago, has come into possession of the mills of the Muskegon Iron and Steel Co., at Muskegon. These mills have been closed for several years. The Muskegon chamber of commerce is to furnish the new owners a bonus of \$10,000 on condition that the mills are started and that they employ 100 men.

Reports from the St. Joseph fruit district state that the crop promises to be extremely heavy. Two-thirds of the peach buds are said to be alive and it is believed that these will develop all the fruit that the trees can hold. It is thought the berry crop will be larger than last year as many acres were injured by dry weather last season.

The heavy rains of the latter part of last week resulted in considerable damage to property and crops in various parts of the state. At Rogers City the dam in Oqueoc river gave way. The bridge at the mouth of the river was swept away and 7,000 pine logs went into Lake Huron. Bridges in the vicinity of Cheboygan were washed out. In Isabella county the high water threatens to ruin the wheat crop.

General.

President McKinley has named Judge William R. Day, of Ohio, to be assistant secretary of state.

Oshkosh, Wis., is soon to put into operation a factory for making blinding twine from marsh grass. It is said to be the first of its kind in the world and will employ 300 hands.

The cashier of the postoffice at St. Louis, Mo., who has held the position for 18 years, has been arrested for embezzling \$15,000. He is a brother of C. M. Hayes, general manager of the Grand Trunk railroad.

Newport News, Va., was visited by a disastrous fire last week destroying property to the value of \$2,000,000. Two immense piers were burned to the water's edge and three vessels with their cargoes were destroyed.

A Chicago grand jury returned indictments against a number of the persons connected with the Globe Savings bank which recently failed. Charles M. Spaulding, the president of the bank and treasurer of the University of Illinois, was sent to jail and his bail bond fixed at \$90,000 which he was unable to furnish.

The opening of Tennessee's Centennial Exposition occurred last Saturday. The attendance on the opening day was estimated at 30,000. President McKinley put the machinery in motion shortly after noon by pressing an electric button which had been placed in the telegraph room of the White House.

The flooded area in the Mississippi valley is not decreasing very rapidly. From Cairo down as far as Vicksburg the water has receded somewhat, but near the gulf fresh breaks in the levee have resulted in submerging large areas. The government engineers do not anticipate any further levee breaks, although they expect the water in the river to rise still higher, as the melting snow in the north and the heavy rainfall throughout the central portion of the Mississippi valley will keep the small streams full for some time to come.

Strange New Shrub that Cures Kidney and Bladder Diseases, Rheumatism, etc, Free

We have previously described the new botanic discovery, Alkavis, which proves a specific cure for diseases caused by Uric acid in the blood, or disorder of the Kidneys or urinary organs. It is now stated that Alkavis is a product of the well-known Kava-Kava Shrub, and is a specific cure for these diseases just as quinine is for malaria. Hon. R. C. Wood, of Lowell, Ind., writes that in four weeks Alkavis cured him of Kidney and bladder diseases of ten years' standing, and Rev. Thomas M. Owen, of West Pawlet, Vt., gives similar testimony. Many ladies also testify to its wonderful curative powers in disorders peculiar to womanhood. The only importers of Alkavis so far are the Church Kidney Cure Co., No. 418 Fourth Avenue, New York, and they are so anxious to prove its value that for the sake of introduction they will send a free treatment of Alkavis prepaid by mail to every reader of THE MICHIGAN FARMER who is a sufferer from any form of Kidney or Bladder disorder, Bright's Disease, Rheumatism, Dropsy, Gravel, Pain in Back, Female Complaints, or other afflictions due to improper action of the Kidneys or Urinary Organs. We advise all Sufferers to send their names and address to the company and receive the Alkavis free. It is sent to you entirely free, to prove its wonderful curative power.

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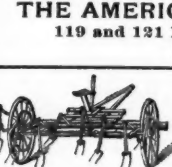
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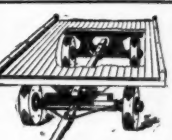
IN GOLD FREE.

Are you a smart speller? We give \$500 away in prizes to those able to make the largest list of words from the word SUBSCRIBERS. You can make at least twenty, we believe, and if you can, you will get a present anyway, and if your list is the largest you will get \$100.00 in cash. Here are the rules to follow: Use only words in the English language. Do not use any letters in a word more times than it appears in SUBSCRIBERS. Words spelled alike can be used only once. Use any dictionary, and we allow to be counted proper nouns, pronouns, prefixes, suffixes, any legitimate word. This is the way: Subscriber, subscribe, is, air, rise, rub, burr, cub, cur, crib, etc. Use these words. The publisher of THE AMERICAN WOMAN will give away, on June 15 the sum of \$500, divided into sixty prizes, for the largest lists of words as above: \$100 to the person making the largest list; \$50 for the second largest; \$25 each for the next three largest lists; \$20 each for the three next largest; \$15 to each of the next three; \$10 to each of the next nine; and \$2 to each of the next forty largest lists. We want you to know our paper, and it is for this reason that we offer these premiums. We make no extra charge for the privilege of entering this word-building contest, but it is necessary to send us 25 cents silver or gold, for which we will send you our handsome illustrated 28-page magazine for six months, and the very day we receive your remittance we will mail you free the following ten popular novels, by well-known authors: "Princess Bah," by Francis Hodgson Burnett; "Hugli Bicketer's Wife," by Eliza Wheeler Wilcox; "Amy's Lover," by Florence Marryat; "Why They Parted," by May Agnes Fleming; "Guy Newton's Revenge," by Mary Cecil Hay; "Our Mutual Enemy," by Jane G. Austin; "Clarrissa's Choice," by "The Duchess"; "Laura Belton's Secret," by Helen Forrest Graves; "Gold and Gilt," by James Frank Elfts; "Uncle Lot," by Harriet Beecher Stowe. This offer is the greatest you have ever had made to you. Send your list at once. If you win one of the prizes your name will be published in our July issue. Address

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HOME CHATS WITH FARMERS' WIVES.

A LITTLE TALK WITH GIRLS.

It is the prospective farmers' wives, the girls of to-day, to whom our chat will be directed this week; the bright, merry, fun-loving girls. And I hope they will not consider what I am going to say as "preaching," and turn up their pretty noses and lay the paper aside unread if they think I am a little severe. It is meant for your good, dear girls, and as it sometimes occurs that we heed what someone outside of our family has said, even though the same advice from a parent would not be considered, I trust these words may do some good, reach some heart inclined to be a little wayward, set some girl to thinking if her own conduct is above reproach.

What I shall say to you to-day is particularly in regard to your behavior when in company, when you are away from home, out from under the watchful eye of mother and father, accompanied to some place of amusement by a young man.

You like to have a good time, you like to dance, to talk and laugh with your young companions and there may be no harm at all in your doing so. Yet let me warn you, as no doubt your mother has done many times before, to be very, very careful what you do and what you say. Now, do not say, "Oh, pshaw, can't we have a little fun without being preached at?" Do not say, as I have heard girls say, "I don't care what folks say, let them talk if they want to; it won't hurt me any." But, my dear, it will hurt you; it hurts any girl to be talked about. Be careful to give no occasion for it.

Of course you will never, under any circumstances, make advances toward those of the opposite sex. You may think a little flirtation harmless, but no true woman should countenance such a thing. Never accept attentions from strange men, and be very careful how you encourage any. It may not mean anything on your part, yet be taken seriously by another. Never so far forget your womanhood as to be in any way "free," as the saying is, with members of the other sex. Thoughtless, though by no means ill-intentioned, girls sometimes are guilty of great indiscretion in this direction.

You can have no conception, dear girls, of the evil which there is in the world. You in your purity and innocence do not mean any harm, but once let your name be spoken as one who is in any degree careless of decorous conduct and you will be fortunate indeed if you escape the tongue of those who are ever ready to pick a girl's good name to pieces without hesitation.

Be ever on your guard when in company. Do not be betrayed into any indiscretion. Be modest and retiring, and remember that the quiet, reserved girl is the one who most frequently attracts favorable comment and escapes adverse criticism. Never be boastful, but preserve a decorous, lady-like manner at all times.

The jolly, high-spirited girl, who is inclined to laugh a great deal and whose voice will get above society pitch, must not forget that all are not so lenient in their judgment as her own family. We know that it is not in good taste to attract attention. A girl may not mean anything wrong or out of the way, yet it is a very easy matter to be indiscreet, and one act of indiscretion may cost very dearly in the end.

No doubt your mother has told you all this and I hope a great deal more pertaining to things upon which I can here but lightly touch. It is a duty which every mother owes to her daughter, yet one which all too many unduly neglect.

When she tries to talk with you concerning these things do not refuse to listen to her words. She means them for your good. She knows more than you do of the dangers which beset young girls when they begin to "keep company" and go into society. Heed her advice, as you value your future happiness. You little dream of the facts which she could disclose to you concerning the pitfalls which beset the young.

Now just a few words in regard to your conduct toward the particular young man whom you are beginning to favor with your preference. Be not ready to accept attentions from one who is called fast or wild. Choose one whom you can respect for his sterling qualities of manliness, and do not go for a single time with any young man who keeps low associates of either sex. You take great risk when you step into a vehicle and drive off with such a one. You may suffer no disrespect at his hands, yet the tongue of the ever-ready gossip may get in its work, your companion himself may make his boasts to others of his kind, regardless of the truth, and you will be powerless to defend yourself. Choose carefully your male associates. Keeping the company of one who was loose in his morals has been the ruin of more than one well-meaning girl.

Girls should always be very careful of their deportment when in the company of young men. Promiscuous caresses should be strictly prohibited, and the young man who proffers them given to understand it. When men come to choose their wives they want those who have not been bugged and kissed by half a dozen other fellows. Let the caresses be reserved for the one above all others who will sometime come into your life.

Do I hear you saying, "How prim!" Perhaps, but remember, I am telling you nothing which you will not sanction when you can survey life from the sunny side of forty, and have daughters of your own to counsel. And remember this above all: You will never have cause to blush for anything you may have done in youth if you listen to your mother's words of advice in these matters.

One word more and I am done. Never put upon paper, in the form of a love letter, anything which you would not be willing for all the world to see. There's many a girl who has regretted doing this. Be careful what you write, and put nothing into that letter which you would not want mother to read.

Then in regard to your photographs. Do not distribute these among your young men friends, nor will the girl with good taste sit for her picture with her "beau," as so many girls foolishly do. It may be a little embarrassing, to say the least, in future years when you are the wife of some other man.

I haven't told you a thing, my dear, but that your mother might have told you, and I hope she has already done so, but mothers have a foolish hesitation about talking with their daughters. If this meets the eye of one mother who has not done so I hope you will lose no time about it, but draw your daughter to your side and tell her all that she ought to know in regard to these matters. Tell her all that you would have been glad to know at her age. Forewarned is forearmed, and many times girls are led into wrong-doing through ignorance.

HOME SANITATION.

FOOD.

An authority on dietetics says: "The laboring man, if not properly nourished, inevitably supplies the deficiency with drink." Then every housekeeper ought to know something of the value of foods, that when a meal is placed before the family the food elements are in due proportion.

In no other department has the housekeeper such complete control as in the case of foods, and a proper combination of food materials is necessary for perfect health.

The two great offices of food are to keep the body warm, and keep it in working condition. All the food we eat is classed under four heads: Amylaceous, that which is starchy; saccharine, that containing sugar; oleaginous, fatty; and albuminous, food containing albumen.

Saliva digests starch; gastric juice digests sugar and albumen. Pancreatic juice does not select its work but digests all, whether the food is albumen, sugar, starch or fat. Bile, on the contrary, will not condescend to notice only the fats, but it has other work to do. It is its business to keep things from spoiling, and to see that everything goes on smoothly. Sometimes it gets worn out because it gets too much fat to digest, and this state is generally called biliousness.

We need to eat considerable fat in winter to keep us warm, but the variations in climate necessitate a change in diet. In the summer, fruit and vegetables should be provided and fat meats avoided.

Butter is one of the best of fats and should be used instead of lard whenever possible, as lard is least healthful of fats.

Cheese contains a very large amount of nutriment in condensed form and is often useful in promoting the digestion of other foods. Beans are also very nutritious. Onions are recommended as an excellent nerve food, one onion to be eaten raw every day.

Fish is now considered a good brain food,

as it contains so much of phosphates. It is also a very digestible and healthful food, but not so nutritious as meat. Fish is very nitrogenous, for which reason a good deal of starchy food, such as potatoes, is particularly suitable to be eaten with it.

When a person has been a long time without food, milk or soup are among the best things to give. Milk, eggs and whole wheat flour contain the different classes of food in the right proportion. Therefore, eggs on toast, or mush and milk are desirable foods. Milk is a naturally prepared food and contains all the elements of which the body is composed, which number sixteen. Eggs, like milk, contain all the material necessary for the growth of the body.

Bread is called the staff of life and it must be light, porous, perfectly sweet, and thoroughly baked to be healthful.

Butter is nearly all fat; vegetables nearly all water, but do not despise them on this account. Lean meat is a muscle-making food.

Stewing is the most economical method of cooking meat, as then all parts are tender and eatable. Broiling and roasting are the most healthful; next, stewing or boiling. Fried meats are not healthful, but it is a convenient mode of cooking and makes variety.

The common method of boiling eggs three or more minutes is not the best. The better way is to pour boiling water over the eggs and let them stand where they will keep hot, but not boil, for ten minutes. Or they may be boiled rapidly for twenty minutes or half an hour; this will make them mealy and digestible.

Food is a fuel and supplies heat to the system, and the unit of value in any food is called a "calorie." A man doing a moderate day's work requires 3,500 calories every day. There are other elements that enter into the value of food beside this heat value. A knowledge can be obtained by the progressive housekeeper from books. Three pounds of chicken will give 990 calories, but one-half pound of good oatmeal, costing two and one-half cents, will give more real fuel value than the three pounds of chicken. Two pounds of round steak will give 1,710. One pound of smoked ham will give 1,735 calories. We buy extravagantly, not knowing the value of foods. We buy the high-priced oysters, having little food value, and ignore the cheap cheese that has a high food value.

Rice contains a great deal of starch. Taken alone this is not a nutritious substance, but when used with milk and eggs it becomes a good and healthful food, and when used with vegetables and meats, will take the place of potatoes.

Statisticians estimate that by the mere ability to obtain enough good food the mortality has been reduced one-half in France.

NINA BELLE.

FLOWER TALK.—No. 2.

Where shall we locate the flower garden is the next question to be considered. In case you have a lawn subject to the regular and timely use of the lawn-mower, the borders in circular, oval, or fancy shapes may be scattered here and there according to the dictation of the owner's taste; but have them all as well in sight of the doors, windows, and porches of the home as possible; and never trouble about their appearance from the street.

Many times common things, shrubs and plants already established in the yard, may be greatly embellished and beautified by making them the central point of some new idea in arrangement. For instance, there is a flowering almond, old, sprawling and may be struggling for life, with its roots beneath a tough sod which insists upon appropriating nearly all the moisture coming that way. Every spring, in its own brief season, the almond is indeed a dream of beauty; but how soon, and for how long, it is without grace or comeliness. If it is in a sunny, unshaded spot, I would entirely remove the sod from an oval space about five or six feet in length by three in width, with the bush exactly in the center. I would then remove all the scraggy and ill-shaped growth of the bush, leaving only the strong upright portions. In removing the sod and loosening up the under soil, great care should be taken that the roots are not injured or greatly disturbed. Then fill up the oval space with rich mold mixed with fine sand. This makes an ideal location for your geraniums when you are ready to set them in the open ground. In default of geraniums, any showy flowers of a suitable height, a long season of bloom, and contrasting colors, would do just as well; and a border of pansies around the outer edge would make a handsome finish—pansies or any other low-growing and free-blooming plant. The above plan would not serve for a bushy plant or shrub for a center. It must be remembered that very few flowers will thrive at all in the shade.

If you have only an ordinary farmhouse yard, where the lawn-mower is unknown, and where during the busy season the grass sometimes reaches an unsightly length, you would do better to have the flower borders all in a group. By all means avoid the old-fashioned long straight border on each side of a front walk. A border in that form is allowable only against the palings of the yard fence.

If you are so happy as to have intersecting walks outside the shadow of house walls and trees, no matter at what angle the intersection occurs, that is an ideal location for your flowers; and you can have the garden as large or as small as you choose, preserving the form given by the walks and using the side farthest from the house walls. Of course, the sod must be removed from

this plot, the underlying soil dug up, pulverized, and a mixture of black mold and fine sand filled in to bring the surface at least four inches above the old surface, as the new will settle considerably. A curbing of brick or stone will add much to the neatness and stability of the outline of your garden. If the curbing is to be of the latter, the stones should be of selected size and shape, fitting together as closely as may be, and set into the ground enough to secure a firm upright position. If the garden is sufficiently large to require walks, these are better without curbing, in which case the entire surface is left free for the spring swarding. If you have perennials, the roots of which must stand year after year, place them here and there as near the curbing as is allowable and at the corners, which should all be rounded.

Such a location and arrangement will count for much when the time comes for the grass in the yard to be forced upon the attention of the busy father, son or brother, as room for the free swing of the scythe is always a consideration.

As will have been surmised, the construction of the above described curbed garden will, for the heaviest of the work, require the services of a man, a spade, and a wheelbarrow. This will be difficult to secure when time is money to the farmer; but plead earnestly. Tell them how much more than money the flowers will be to you. Remind them of what so many men fail to realize; that while their world stretches all abroad, yours is girdled in by the house walls and yard and garden fences. Then show them that within those circumscribed limits does indeed lie your kingdom; and there your heart and life find their rest, or at least would, could the little embellishments you crave be supplied.

Sweet peas should be planted as soon as the frost is out of the ground and the soil dry enough to prevent the rotting of the seed. As they require deep planting, and are slow in making their appearance, it is advisable to dig a trench three or four inches deep, drop the seeds not too thickly in the bottom, covering them with an inch of soil, and drawing the earth into the trench until it is full, after the plants are up far enough to allow the treatment.

Do not lose sight of the things you are starting in the house. Water with warm water, keeping the soil moist, and after the plants are up turn the boxes daily, for the plants will lie right down to get their faces to the light if it is always at one side.

FOSTORIA.

JANE L. CHAPIN.

M. E. S. C. AGAIN.

In my letter of March 20 I did not intend (by telling my experience and upholding the views of our sensible writer, Mrs. Grace,) to create such a sensation on the subject of church-going. But all, I suppose, have a right to their opinions and are perfectly free to express them, though some may be a little hasty in their decision. I am glad to see each one interested on the subject, and was especially pleased to read the criticism of April 10th.

In the Bible we see the little passage, "Judge not that ye be not judged." We all, to a certain extent, have crosses to bear, and perhaps I was foolish to believe on my return from church that day, that staying at home was my cross, and I perhaps foolishly shouldered it.

In answer to Fanatic's first question, I think I could have been better benefited to have attended church during those seven years; to the second, I answer in the affirmative; for I think under the circumstances I have done all any Christian could do. In regard to the cases you mention, I would say they are but two out of many, and, as has already been said, we see many more wives waiting and praying. I candidly think it is one thing to talk, yet another thing to do, circumstances considered.

I did not wish to be exonerated in the least when I wrote that letter to the Household, but as the rest were writing their experiences I thought I would write mine, not saying I have acted wisely in remaining at home from church.

I have happened to know of just such conversions as you mention, (four from this little church which I have attended in the past), and where are they to-day? They are the worst kind of back-sliders, and no doubt will die in their sins. If I thought my husband was to be converted as I have known of some husbands pretending to be, (for their wife's sake), I would rather he would remain where he is.

Again, one does not necessarily have to attend church to be a Christian, for one can in many ways serve the Master at home. I think we can be better benefited to attend church, and more so to be attended by our families.

I thank Fanatic for the advice given, and think it good, but as I told a friend the other day, I am glad of that little verse which says, "Man looketh on the outward appearance, but God looketh on the heart."

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M. E. S. C.

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A CONVENIENT OPPORTUNITY.

I am a reader of the MICHIGAN FARMER and a much interested one. Like "Fanatic If You Please" I am a stranger, but would like to contribute just one article if no more. I would like to say a few words in defense of those meek husbands that are given such a raking over the coals from week to week for not attending church every Sabbath. A man will try to defend himself in every way possible until he is brought into contact with a woman's tongue or pen, then he remains silent and lets them have their say. Now, I will not, like Mrs. A. Do, bet a sweet apple, for our cellar does not boast of that luxury, but I will say that I believe there are as many women as men that find an excuse for not going to church. They have either had a hard day's work on Saturday and are too tired, or else their outfit is not quite stylish enough, for I think as a rule we are more particular about matters of dress than our liege lords are, but some are always grumbling about something, and when there is nothing else they will make a convenient opportunity of their husbands and give them a slap right in the face through the papers. We live four miles one way from church and three another, and this is one of the many excuses we have for not attending very often, but will say that my husband is ever ready and willing to accompany me whenever I manifest a desire to go. We have our papers and some very good books to read on Sunday and the day is very pleasantly spent if we choose to stay at home.

I can call to mind women, who think it their duty to attend their church every Sabbath morning, who will start from home finding fault, perhaps their horse has not been groomed to suit their taste or the carriage is not so immaculate as might be, and they start with a scowl on their faces; and no doubt there is a rankling within while they are trying in vain to catch the meaning of the words as they fall from the lips of the minister who is trying to instill into the minds of his hearers thoughts that are noble and pure. When they arrive at home to find the husband quietly reading his paper the faultfinding begins again. Perhaps the fire in the kitchen stove has not been kindled, or some other order has not been obeyed, and the mistress of the house is anything but pleasant. Now I contend that such people commit more sins by going to church and returning home in such a state of mind than they would by staying at home and trying to have the day spent in a cheerful manner.

To my mind a peaceful, happy home is one of the first steps to Christianity.
MRS. DE FENSE.

WOOL FOR COMFORTABLES.

Several requests have been received for information in regard to preparation of wool for comfortables.

The long, coarse wool is better than fine for this use, but the latter may be used. It is more difficult to cleanse, and the smell clings to it more tenaciously than to the other.

Wash the wool in warm water, using soap rather sparingly, and in the first water only. Too much soap renders the wool slimy. Salsoda or concentrated lye may be used to good advantage, although the latter would probably prevent the same difficulty as the soap. However, we had no difficulty in cleansing the wool perfectly for mattresses last year, using suds only for the first water, after that as many waters as necessary of that which was clear and quite warm. When white and clean, the wool was spread upon sheets and laid on the grass to dry. We did not card it for our use; we picked it apart, light and fine, but Mrs. J. L. C., of Fostoria, who sent instructions for making wool comforts to the Household last fall, (Oct. 31 number), used cards such as our grandmothers had, and made the wool into "bats" before placing inside the covers. Anyone who has ever seen any of the bats which used to be made would know exactly how to go to work at them. Perhaps Mrs. C. will tell us more explicitly the modus operandi. Three or four pounds are sufficient for a large comfortable, wool to be weighed after cleansing. A stamped, self-addressed envelope may be sent the Household editor by those interested, and information will be forwarded as to where the cards may be obtained. We cannot state this in these columns. Meanwhile, persons wishing wool mattresses or comfortables would do well to secure them this year, as wool is not likely to be so cheap next year.

TO PREVENT BUTTER BOWLS FROM CRACKING.

1st. When new, soak them twenty-four hours in clear cold water, then dry slowly in a room in which there is no fire heat.

2d. Completely cover in cold water, bring the water to boiling, and boil one hour. Let the water cool before removing the bowl.

3d. Pour into it hot sweet lard, shake and turn until every part is covered. Pour out the surplus lard, if any, wipe with a soft cloth, let stand twenty-four hours, then wash thoroughly in strong soap and water, and rinse. The outside of wooden bowls should, before they are used, be painted two coats.
S. E. W.

There are many blood purifiers, but only one Hood's Sarsaparilla, which is reliable, and which cures.

A CHARLEVOIX COUNTY REPRESENTATIVE.

In reading this department of the MICHIGAN FARMER I find so much that is good, sound reading and a real help that I cannot forbear to add my mite.

I have had some experience in the care of milk and feeding the same to pigs, calves and chickens, and making dairy butter. I have adopted the plan of skimming all my milk in the morning. There is no creamery in this new country, and I find it just as profitable saving part of what I skim to feed the calves at night; it certainly is more satisfactory. To be sure, there is a thin cream on the milk when I come to feed the calves at night, but I never heard of its doing them any harm and I do not believe it contains the same amount of butter fat that the first skimming does. I think that some farmers often spoil a good calf by feeding too blue milk. Some farmers' wives work hard all day and then drag themselves into the cellar in the evening to skim some 14 or 15 pans of milk, believing it actually necessary to do that to be saving, economical housewives. I like to have my work done in the forenoon, systematically and in good order, and there seems to be lots of things against a farmer's wife doing that, but this will be a help, at least I find it so. The evening meal and the necessary work that follows taxes my strength sufficiently.

In regard to feeding calves, I would like to know of the best way to feed oil meal; whether to cook it or feed it raw. I have done both but prefer to cook it. It seems to me to do the calves the most good cooked.

I think a dairy thermometer a great help in making butter. I make most of my butter in the winter; it's easier to make and commands better prices. Of course I make butter on a small scale in the old-fashioned way, but many do that in this new country.

I want to know what the sisters think of coloring butter; those opposed to it please give their reasons.

I am not in politics; am willing to let husband, father, and son see to that part of the work and worry of this life; also have a husband that never feels like going to church for which I am very sorry.

I do a little fancy work and try to keep within sight of the latest, up-to-date styles, but do not care to be "racin' after fashion" all the time, as Samantha Allen says. I endorse all that tends to advancement for farmers' wives, sons, and daughters, both social and educational. FARMER'S WIFE.
IRONTON.

[We agree with you that a dairy thermometer is a great help in making butter. Everyone who keeps cows should have one; it is a great labor saver. As to coloring butter we are in favor of it, but do not use too much of the color.—Ed.]

DIDN'T KEEP HIS WORD.

When thinking of entering the Household again I feel quite a stranger, but I must say a little on this subject of church-going under difficulties.

I have in mind a woman who, before she would marry him whose choice she was, insisted on his making a vow never to try to influence her in her spiritual advancement, which was done, and before witnesses. She attended church alone but without any after unpleasantness until the first baby came. When she could take baby and again commence church-going she found to her great sorrow that it would be at the expense of harmony in her home, and I heartily agree with Mrs. Rockwood that under those circumstances one is justified in giving up the privilege of church-going, and doing so at least will not prevent one's having "those sweet little meetings alone with God and the baby" as Mrs. Grace so prettily puts it.

It seems to me that discord in a family, especially where there are little ones growing up, would be one of the most sorry sights imaginable to the Infinite One. A mother or older sister left to fill mother's place to father and the younger brothers and sisters can do much good by teaching the children that the best way to realize the allness of God is to think of Him all they can, for, you know, thought grows by repetition, and nothing but love and harmony can come from the worship of the Infinite One.

Now just a few words of encouragement for the older children of large families who are left motherless and to whom the choice is given of staying away from divine service or going into the wide world to do for themselves, leaving a large family of brothers and sisters to struggle alone and against great disadvantages for spiritual advancement. How much I wish such had someone older to help them in this, but in the meantime, do what you can by yourselves. You know each one must work out his own salvation, anyway. All that anyone can do for another is to point out the way; each must realize the kingdom of heaven for himself by doing the work in thought.
SISTER MAY.

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A WORD OF ADVICE.

I notice a very unhappy feeling has come over some of the writers of Household in regard to their husbands not being willing to attend church with them. Now allow me to give you a little motherly advice, as I am undoubtedly very much older than any of you.

I am not going to advise the wife to attend picnics, socials and dinner parties without her husband, but I think it would be perfectly proper for her to attend church without him.

Judging from your grievous tones I am sure it was in the church your husband found you and, admiring your Christian character, wanted you for a wife.

A young married man said, only a few months ago, to his brother who was not in the habit of attending church very regularly, that if he wanted to wait on a nice girl he should go to church as there was where he found his wife, and as he said it he looked into her face with pride and satisfaction. He is not a professor either, but he wanted a wife who is.

Now, my advice is to go by all means, if you have to go alone, but do it with a spirit of cheerfulness. What matters it if the dinner is not ready, or the husband utters a few words of complaint. He has his trials and perplexities, and he almost always bears them alone. This may be his only fault. Let us be careful about falling into the habit of faultfinding; it is apt to mar our whole lives. We have the dear ones with us to-day; we may not have them to-morrow. Let us ask our kind Heavenly Father to "lead us lest we stray." It has been suggested by some of the members of the Household that if one desired to do so they could live a Christian life at home. I could not, and I would not advise you to try it. Go to church by all means and take the children when they are babies. It will help you so much in the training of them now and in the years to come.

HIGHLAND. MRS. CLARK.

HOUSEHOLD HINTS.

To polish spectacles use a Japanese paper napkin. They may be bought by the dozen very cheaply.

In cooking the wings of fowls, bend the tips back of the second joint. This makes a flat, three-cornered piece much preferable to the usual shape.

A TEN-CENT menthol pencil will pay for itself many times over in relieving headaches. Rub this lightly over forehead and temples and the effect is at once perceptible.

Use paper flour sacks to store woollens in. Tie tightly around the top and sprinkle cayenne pepper, salt, borax, or some objectionable substance within the mouth of the sack, after tying, to discourage the entrance of moths.

SALTED fish is best freshened in sweet milk. Lay the fish in the milk with the skin side up. Salted meat should be put in cold water and skimmed when the water boils, then remove to the back of the range where it will cook slowly; replenish the water as it boils away. Leave the meat in the kettle until cold.

CONTRIBUTED RECIPES.

MILK TOAST:—Toast bread and spread butter on it. Prepare a cream as follows: Heat one quart of milk until it comes to a boil; stir one tablespoonful of flour into a little cold milk; stir this batter into the boiling milk. Then add a piece of butter the size of a walnut and salt to taste; pour this over the toast.

PATTIE CAKES:—One cup granulated sugar, two eggs, a piece of butter the size of an egg, one cup sweet milk, two teaspoonfuls cream of tartar, one teaspoonful saleratus or soda, a little grated nutmeg and two and one-half cupfuls of sifted flour. Bake in patty pans. This is sufficient for two dozen.

HOW TO COOK PARSNIPS:—Slice; boil until tender; drain off the water; add a piece of butter, one cup of sweet cream and salt and pepper to taste.
MRS. A. W. T.

LEMON PIE:—Three tablespoons cornstarch dissolved in a very little cold water; pour on boiling water to cook until thick and clear; beat, then add one cup sugar, butter size of a large walnut, yolks of two eggs, grated rind and juice of one lemon, pour in a baked crust, then cover with beaten whites and sugar; brown in the oven.

HOT WATER SPONGE CAKE:—Two-thirds cup sugar, four eggs, two teaspoons baking powder, one and one-half cup flour, four tablespoons boiling water, pinch of salt. Cream yolks and sugar, add beaten whites, then flour and baking powder. Stir thoroughly, then stir in boiling water. Bake in a quick oven.
MRS. W. H.

Lost Control of Her Nerves.

A HELPLESS, PAINFUL CONDITION.

From the Tribune, Minneapolis, Minn.

It is said that the present generation is living in an era of nervousness. Some attribute the cause to the climate of our country; if there is an atmospheric effect it certainly is the least of the causes that

hurry we bolt our food, sleep with irregularity, with seldom a thought of our nerves.

Mrs. C. H. Guise, of 410 Central Avenue, East Minneapolis, had the misfortune to suffer constantly from nervousness, and her trouble was aggravated by want of sleep. Night after night of sleeplessness had created a worn out condition and she sometimes would jerk and jump unconsciously.

In relating her experience to a Tribune representative, she said:

"I wish to state to you the great benefit I have derived from Dr. Williams' Pink Pills for Pale People. For many months I was afflicted with nervous debility and could get no relief, until I began using the Pink Pills, the required result came very soon, and I hope I may have the privilege of recommending them to everyone suffering as I did, for I am certain the medicine gives instant relief without any bad results."

(Signed) "Mrs. C. H. Guise."
Subscribed and sworn to before me, a Notary Public.

T. E. ANDREWS, Notary Public.
Hennepin Co., Minn.

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CHATTEL MORTGAGE—RIGHTS OF MORTGAGEE AGAINST THIRD PARTIES BUYING AT AUCTION GOODS COVERED BY CHATTEL MORTGAGE.—P. C., Homer, Mich.:—A gives a chattel mortgage to banker B. and afterwards sells the goods covered by mortgage at public auction, banker B. being present. Goods sold and note given to A. Banker B. asks C., a purchaser of a horse at the sale, whether he knows that the horse was covered by a chattel mortgage. C. did not. Banker B. says if farmer A. brings the notes to him it will be all right, if not it will not be all right. Has banker B. any claim on the horse, or did he lose his claim by silence at the sale?—The facts as stated do not in any sense constitute a waiver of his claim by B., and so we must look at the question as if he were not present at the sale. If the mortgage was not filed at the time of sale, and C. had no notice of it, he would be an innocent purchaser for value and would gain title to horse free of encumbrance of the

DESCENT OF REAL ESTATE OF MARRIED MAN WITHOUT ISSUE—WHAT TITLE WIDOW CAN CONVEY—ADOPTION OF CHILDREN—NECESSARY STEPS.—C. H., Cass City, Mich.:—1. A man dies, leaving a widow, but no children, and 40 acres of land of a value less than \$1,000. Does the widow hold all or only half? A husband or wife dying without issue, the real estate descends as follows: (a) One-half goes to the surviving spouse and one-half to the mother and father of the deceased, or, if one of the parents be dead, to the surviving parent. (b) If neither parent be living, one-half goes to the surviving spouse and one-half to the brothers and sisters of the deceased and to the children of deceased brothers and sisters by right of representation. (c) If the deceased spouse leaves none of the relations above spoken of the entire estate goes to the surviving spouse. However, in case of a widow these arrangements are in lieu of dower. She may (by statute of 1893) elect instead to take her dower, i. e., a life estate in one-third of her deceased husband's real estate. If she so elects she must do so within a year after the appointment of the administrator of her husband's estate. The rule in the case of personal property is otherwise. 2. Can she sell and give perfect title, or is her claim only a life interest?—She can dispose of the property as she pleases and can give as good a title as her husband had at his death, if there has been no subsequent encumbrance. 3. What steps is it necessary to take in adopting a child?—After consent has been obtained from the proper parties a declaration in writing must be made out, which should contain the name of the child and the intention of making the child the petitioner's own. It should also state the full name they desire the child to bear. The declaration should be executed by the person signing it, and acknowledged before a notary. It must then be presented to the Judge of probate of the county where the petitioner resides. When the probate judge is satisfied of the good faith of the petitioner and that he is a suitable person to have the custody of the child, he must make an entry in the court journal of the proceedings and thereafter the persons adopting shall stand towards the child in every respect as natural parents.

Neither the week past nor indeed the past month have brought any improvement to winter wheat. The earlier reports of winter damage were not exaggerated, and the weather of the past thirty days has not been calculated to repair the situation as it existed on April 1. The crop in Indiana, Illinois, Wisconsin, southern Iowa and Missouri is hopelessly damaged beyond repair by future weather conditions. Current crop reports, government, state and private, due during the first ten days of this month, will reflect further deterioration of the crop.—Chicago Times-Herald.

The market is well supplied, especially with fair grades of ordinary to good dairy, which sell rather cheaply. New butter not lacking in quality, and when grass butter enters into market there will be a disposition to neglect any stock on hand. As soon as pastures are good and the flow of milk increases, we look for a further decline in values, although they are pretty low now. Values show no change since a week ago. Quotations in this market range as follows: Creamery 17@18c; fancy dairy, 13@14c; fair to good dairy, 11@12c; low grade, 6@8c. At Chicago the market is quoted firm and active, but at a decline from last week's prices. Buyers take only sufficient for immediate wants which shows they are not sure a further drop in values may not come within a short time. The general demand, however, is quite active, and stocks show no accumulation. Quotations in that market on Thursday were as follows: Creameries—Extras, 15c; firsts, 13@14c; seconds, 11@12c. Dairies—Fancy, 13c; firsts, 11c; seconds, 9c. 100 lb. milk on creamery firsts 11@12c; packing stock fresh 8@9c; roll butter choice, 8@9c. The New York market has held very steady during the past week, and the line of valuation on desirable stocks shows little change. The increase in receipts so far has not been sufficient to more than meet the demands of the trade, and stocks have not accumulated. All grades except the lowest have moved fairly well at last week's prices. Quotations in that market on Thursday on new butter were as follows:

Eastern creamery, fancy.....	17	@
Eastern creamery, good to choice,	13	@16
State dairy, h. f. tubs, fancy, fresh.....	16	@
State dairy, h. f. tubs, good to choice....	11	@15
Welch tubs, extras.....	15	1/2@

Creamery, Western, fancy.....	16	②
Creamery, Western, choice.....	17	②
Creamery, Western, fair to good.....	13	②15%
Dairy, Western, firsts.....	11	②12
" thirds to seconds.....	8	②10
Western imitation creamery, choice.....	14	②14%
Western imitation creamery, fair to good.....	10	②13
Factory, fresh, choice.....	10	②11%
Factory, fresh, fair to good.....	8	②9

At the Utica Board on Monday last 41 packages of creamery butter were sold at a range of 17@18c. At Little Falls, on same day 19 packages of farm dairy were sold at a range of 16@18c, mostly at 17c.

CHEESE.

So far as this market is concerned, conditions are just the same as for some weeks past, with no change in prices. The range for the best full cream State is 11@11½¢, with no apparent reason for a change at present. At Chicago the market has been firm on several grades, but there is a firm feeling in the trade at the present range of prices. Quotations in that market on Thursday were as follows: Full creams—Young Americas, 10@10½¢; twins, 9½@10¢; brick, full cream, 9@9½¢; Swiss, fair to choice, 9@9½¢; Limburger, good to choice, 8@8½¢. The New York market is quite largely unchanged, and the receipts, although receipts have increased, values show a slight improvement. Exporters are not doing much this week, although they bought freely last, owing to a sharp decline in Liverpool. Small size cream cheese have been in active demand all week, and values have advanced in consequence. Small sizes are taken altogether in the local and nearby trade. Quotations on new cheese in that market on Thursday were as follows:

Full cream, large, colored, fancy.....	10%	@ 10%
" " " white.....	10%	@
" " " choice.....	10	@ 10%
" " " good to prime.....	9%	@ 9%
" " " small size.....	10%	@ 11%
Part skims, good to prime.....	7	@ 8%
Common to fair.....	4	@ 6
Full skims.....	2%	@ 3

On Monday at the Utica Board, 2,000 boxes were sold at a range of 9 $\frac{1}{2}$ to 10 $\frac{1}{2}$ c. On the same day last year about 900 boxes were sold at a range of 7 to 8 c. At Little Falls on Monday 2,729 boxes were sold at a range of 10 to 11 c, the latter for small colored. The demand was active, and competition lively.

At Liverpool on Thursday quotations on finest American cheese were 54s. 6d. per cwt for choice American, both white and colored. These figures show a decline of 2s. per cwt compared with those quoted one week ago.

FLOUR. —Quotations on jobbers' lots in barrels	
are as follows:	
Straights	\$4 50@
Clears	4 25
Patent Michigan	4 75@
Rye	2 75
Low grade	3 50

CORN.—No. 2, 23½c; No. 3, 23¼c; No. 2 yellow, 24½c; No. 3 yellow, 24¼c. The visible supply of corn on Saturday last was 24,967,000 bu., a decrease of 351,000 bu. from the previous week.

OATS.—Quoted as follows: No. 2 white, 22½c; light mixed, 22c; No. 3 white, 21¼c. The visible supply of oats on Saturday last was 13,287,000 bu., a decrease of 329,000 bu. since the previous

RYE.—Quoted at 35½¢ per bushel for No. 2. No. 3 sells at 34¢. The visible supply on Saturday last was 3,649,000, a decrease of 10,000 bu. as compared with the 1917 Saturday.

4 fair butchers cows av 980 at \$2 65; 2 do av 1,030 at \$3. and 2 bulls av 865 at \$2 90.

WHEAT.

Values are lower than a week ago in face of the fact that the visible supply decreased more than expected, and that crop reports show a very unfavorable state of affairs in most of the winter wheat states, as well as in Great Britain and on the continent of Europe. It looks to us as if holders of wheat had better prospects than at any time in three months. Stocks are getting very low in the winter wheat states, and millers are pressed to get anything in the shape of wheat to keep their machinery running. The market is certainly favorable to holders, and the continued fluctuations, the result of manipulation by speculators, should have no effect in influencing them to sell. Wheat is good value at present prices.

The following table exhibits the daily closing sales of spot wheat in this market from April 10 to May 6 inclusive:

		No. 1	No. 2	No. 3
		White.	Red.	Red.
April	10	84%	85%	81
"	12	87%	88%	82
"	13	87%	88%	81
"	14	86%	87%	83
"	15	88%	89%	84%
"	16
"	17	92	93%	87%
"	19	94	95%	89
"	20	91	92%	86%
"	21	90	91%	85%
"	23	89	90	84
"	24	91	89%	86%
"	24	92	93%	87%
"	26	91	92	88
"	27	90	91%	85%
"	28	89%	90%	84%
"	29	91	91	85
"	30	90	92	86
"	30	90	90	86
May	3	90	91%	86%
"	4	89%	90%	85%
"	5	88	89	84
"	6	89	90	85

The following is a record of the closing prices on the various deals in futures each day during the past week:

	May.	July.
Friday.....	92	78
Saturday.....	92	77½
Monday.....	91¼	77½
Tuesday.....	90¾	75½
Wednesday.....	89	76¼
Thursday.....	89	77¼

The visible supply of wheat on Saturday last, as compiled by the N. Y. Produce Exchange, was 34,412,000 bu., a decrease of 1,780,000 bu. over the amount reported the previous week.

The wheat crop in this State suffered severely during April, and conditions will be much reduced. The northern counties, including the Saginaw Valley, report a very poor outlook for the crop.

The Burlington Railway crop report from 800 points in southern Iowa, northern Missouri and Kansas, eastern, central and western Nebraska is out. The report says that the season is backward and the corn acreage in Nebraska increased 5 per cent.

The past week in the northwest was almost rainless and rapid progress was made in the seeding of spring wheat. This makes two weeks in succession with less than normal rainfall, and the planting, which had been somewhat delayed, is now pushed toward completion, except on bottom lands and in the extreme north. At the middle of April there was so much of discouragement in the situation that it appeared possible that a considerable part of the proposed breadth could not be gotten in, but

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

DETROIT, Mich., May 6, 1897.

CATTLE.

Thursday's receipts of cattle numbered 873 head, through and direct to butchers 361; on sale 512, as compared to 542 one week ago. The quality averaged about the same. Trade was fairly active, but prices were 5¢ to 10¢ lower. \$4 50 was the highest price paid for 2 good steers av 1,475 lbs, and \$4 25 for 3 av 1,106 lbs, but the bulk changed hands at between \$3 and \$4 per hundred lbs. Bulls, light to good butchers, \$3 50 to \$3 15. Old cows and common to fair mixed butchers, \$1 75 to \$2 90. Oxen, \$2 75 to \$3 50. Feeders and stockers, \$3 25 to \$4 00. Yearlings, receipts were 234 head, one week ago 226, active sales at \$4 30 to 60 per hundred lbs. There is a good demand for good fresh milch cows and springers common low sale. Range from \$25 to \$45 each, sales mostly at \$30 to \$40 each. Five cars of Texans arrived this week, and this caused a decline, as receipts are expected to increase.

Spicer & Merritt sold Sullivan 20 feeders av 990 at \$3 87½.
J Stephens sold Mich Beef Co 4 common butchers cows av 912 at \$2 50, and 18 steers av 1,015 at \$4.
Weeks sold Sullivan 12 feeders av 896 at \$3 87½, and 3 good butcher steers to McIntyre av 916 at \$3 90.

Dennis sold Cross 2 fat bulls av 970 at \$3 15; 21 steers and helpers av 907 at \$3 85; 21 steers av 985 at

Spicer & Merritt sold Fitzpatrick 10 do av 1,157 at \$3 05.

Denn's sold Cross 3 good steers av 1,106 at \$4 25; 3 do av 730 at \$3 80; 3 mixed butchers av 836 at \$3, and 13 feeders av 854 at \$3 85.

Ted Wilson sold Schleicher 5 fair butcher steers

Harwood sold Sullivan 15 steers av 954 at \$3 90; a fat bull weighing 950 at \$3; 4 fat cows to Black av 1,100 at \$3 20, and 1 do weighing 1,160 at \$3 15; also 4 do av 1,005 at \$4 20, and 26 steers to Sullivan av 920 at \$3 90.

Carman sold Fitzpatrick 5 heifers av 620 at \$3 15; 4 fair butchers cows av 980 at \$2 65; 2 do av 1,030 at \$3. and 2 bulls av 865 at \$2 90.

Roe & Holmes sold Robinson 10 fair mixed butchers at \$89; 2 do cows at \$1.01; 2 do \$2.75, and 9 mixed butchers at \$96 at \$4.

Ted Wilson sold Sullivan a bull weighing 1,250 at \$2.75; 2 good steers at \$1.47; 15 feeders at \$94; 1 fat cow to Black weighing 1,160 at \$3.50; 1 do weighing 1,050 at \$3, and 4 heifers at \$78 at \$3.70.

Henning sold Sullivan 19 av \$31 at \$3.95.

Harger sold Caplis 5 mixed butchers at \$92 at \$3.25.

McLaren sold same 3 mixed butchers at \$1.18 at \$2.90, and 6 steers at \$43 at \$3.90.

Lewis sold same 4 mixed butchers at \$75 at \$3; and a steer weighing 910 at \$3.75.

Bergen & Terhune sold Black 4 fair butchers cows at \$1.52 at \$2.85, and 13 good butchers steers and heifers to Caplis at \$91 at \$3.95.

Adams sold Black 5 cows at \$74 at \$2.70; 10 steers and heifers at \$73 at \$3.70; 4 good butchers steers to Caplis at \$1,050 at \$4, and 9 mixed to Sullivan at \$96 at \$3.60.

Mayers sold Caplis 10 steers and heifers at \$29 at \$3.90, and 4 fair butchers cow weighing 920 at \$2.75.

Stephens sold Sullivan 3 mixed at \$76 at \$3.75.

Clark & B sold same 10 mixed at \$73 at \$3.65, 3 do to Black at \$46 at \$3.75, and 2 cows at \$95 at \$3.

Harger sold Sullivan 31 steers and heifers at \$90 at \$3.85.

Anstey sold Black 5 cows at \$74 at \$3; 2 fat heifers at \$75 at \$3.75, and 2 common at \$86 at \$3.50.

Nott sold Caplis 7 steers and heifers at \$73 at \$3.70, and 2 good butchers steers to Russell at \$90 at \$4.10.

Joe McMullen sold Cross 5 mixed at \$30 at \$3.

Ed Clark sold Fitzpatrick 18 good butchers steers at \$1,030 at \$4.05; 5 fat cows at \$1,088 at \$3.25, and 3 do heifers at \$66 at \$3.75.

Lingeman sold Sullivan 12 steers at \$1,120 at \$4.10.

SHEEP AND LAMBS.

Thursday's receipts of sheep and lambs numbered 1,022, as compared to 927 one week ago. Market slow and 25 to 30c lower than last Friday's closing.

Range of prices, best clipped lambs, \$4.25@4.55; wool, \$4.50@4.85; mixed lots, \$3.75@4.50; common to fair mixed butchers, \$2.50@3.75. No sale of spring lambs reported; market closed weak, several lots remaining unsold at close of market.

Roe & Holmes sold Hammond S. & Co 101 lambs at \$1.01 at \$4.50, and 11 culls at \$2 at \$2.50.

Nixon sold Fitzpatrick 12 lambs at \$70 at \$4.50.

Roe & Holmes sold Loosemore 96 mixed at \$57 at \$3.40, and 21 do at \$65 at \$3.40.

Dennis sold Young 21 wool lambs at \$7 at \$4.75, and 70 clipped do at \$2 at \$4.20.

Buck sold Fitzpatrick 39 wool lambs at \$2 at \$4.85.

Kelsey sold Mich Beef Co 44 lambs at \$56 at \$3.25.

Lewis sold Hammond S. & Co 48 lambs at \$65 at \$3.25.

Adams sold Mich Beef Co 50 mixed at \$59 at \$3.25.

Spicer & M sold same 32 clipped lambs at \$101 at \$4.25.

HOGS.

Thursday's receipts of hogs numbered 3,225 head. Through and direct to packers 336, on sale 2,889, as compared with 1,962 one week ago; there is no change to note in quality. Trade opened rather slow and lower; opening sales range from \$3.85 to \$3.90, later \$3.95 was paid. All sold closing strong, but 5c below last Friday's prices. Range of prices \$3.85 to \$3.95. Bulk at \$3.87 1/2; \$3.95 Stags 1/4 off. Roughs and heavy \$3 to \$3.80. Pigs \$3.90 to \$4.

Roe & Holmes sold Hammond S. & Co 68 av 176 at \$3.95; 40 av 185 at \$3.95, and 81 av 177 at \$3.95.

Dennis sold same 130 av 196 at \$3.90.

Nixon sold same 13 av 259 at \$3.95, and 20 av 214 at \$3.95.

Carman sold same 60 av 180 at \$3.90 and 75 av 166 at \$3.90.

Spicer & Merritt sold Parker, Webb & Co 63 av 185 at \$3.90.

Wilson sold same 38 av 193 at \$3.90.

Mayer sold same 37 av 226 at \$3.90.

Townsend & H sold same 70 av 252 at \$3.90.

Bunnell sold Sullivan 165 av 113 at \$3.91.

Hoover sold same 66 av 169 at \$3.90.

McKinley sold same 10 av 178 at \$3.85.

Dillon sold Hammond S. & Co 60 av 182 at \$3.90.

Belheimer sold same 52 av 198 at \$3.90.

Lingeman sold same 31 av 209 at \$3.90.

Pakes sold same 149 av 208 at \$3.85.

Weeks sold same 96 av 163 at \$3.90.

Roe & Holmes sold same 106 av 109 and 104 av 209 at \$3.95.

Nott sold R S Webb 45 av 166 at \$3.90.

Norton sold same 10 av 203 at \$3.90.

Anstey sold same 50 av 175 at \$3.90.

Hornor sold same 78 av 166 at \$3.90.

White sold Parker, Webb & Co 75 av 198 at \$3.90.

J McMullen sold same 60 av 188 at \$3.95.

Bergen sold Parker, Webb & Co 37 av 162 at \$3.90.

Stoll & Co sold same 111 av 204 at \$3.90.

Henderson sold same 93 av 178 at \$3.90.

York sold same 30 av 177 at \$3.85.

Buck sold same 20 av 225 at \$3.85.

Taggart sold same 54 av 205 at \$3.90.

Spicer & M sold same 24 av 186 at \$3.90.

Stephens sold same 12 av 220 at \$3.90.

Thompson sold same 67 av 180 at \$3.90.

Lewis sold same 38 av 185 at \$3.85.

McLaren sold Sullivan 20 av 178 at \$3.87 1/2.

Beattie sold same 13 av 187 and 11 av 119 at \$3.85.

Driscoll & P sold same 63 av 185 at \$3.90.

Groshaw sold Hammond S. & Co 14 av 161 at \$3.85.

E. O. Knapp sold same 80 av 184 at \$3.90.

Horne sold same 57 av 206 at \$3.90.

Decke sold same 63 av 198 at \$3.90.

FRIDAY, May 7, 1897.

CATTLE.

Friday's receipts of cattle numbered 504 head, through 230; on sale 274. Market active and unchanged from above quotations. Closing rather slow and easy. Veal calves and milch cows unchanged.

Lovell sold Sullivan 2 steers at \$1.235 at \$4.25; 2 feeders at \$935 at \$3.75, and a bull weighing 1,530 at \$3.85; also 2 fair butchers cows to Black at \$1,080 at \$2.85.

Eddy & Forbes sold Kamman 6 cows at \$1.078 at \$3; 2 bulls to Sullivan at \$1.45 at \$3.75; 4 steers at \$67 at \$4.10, and 3 heifers at \$745 at \$3.50; also a feeder to Nixon weighing 900 at \$4.

O'Hara sold Mich Beef Co 5 good butchers steers at \$1,068 at \$4.10.

Judson sold Sullivan 2 stockers at \$765 at \$3.50, and 7 feeders at \$98 at \$3.75.

Roe & Holmes sold Cook & Fry 15 mixed butchers at \$601 at \$3.40.

C E Letts sold Sullivan 22 steers at \$904 at \$4.

Reed sold Caplis 6 fair butchers cows at \$1,065 at \$2.75.

Roe & Holmes sold Sullivan 14 stockers at \$658 at \$3.70.

Haller sold same 5 mixed butchers at \$1,022 at \$3.50, and 5 cows at \$1,072 at \$2.40.

Roe & Holmes sold Kamman 12 steers and heifers at \$833 at \$3.65.

Hogan sold Caplis 3 cows at \$1,085 at \$3.

Parks sold same 2 mixed butchers at \$955 at \$3.25; a bull to Mohr weighing 1,170 at \$3.10, and a cow to Reagan weighing 963 at \$2.75.

Hauser sold Mich Beef Co 5 fair butchers cows at \$1,110 at \$2.80.

Griffin sold Marx 10 steers and heifers at \$896 at \$3.80, and 2 mixed at \$810 at \$3.20.

Jedeled sold Kamman 2 fat heifers at \$865 at \$3.85; a good steer to Mich Beef Co weighing 1,110 at \$4.40; 3 cows at \$1,240 at \$4, and one weighing 1,100 at \$2.75; also 9 mixed butchers to Clancy at \$790 at \$2.60.

Richmond sold Black 3 cows at \$1,036 at \$2.65; a

bull weighing 1,420 at \$3; 2 steers at \$1,000 at \$3.90; and a cow weighing 1,010 at \$3.25.

McMullen sold Sullivan 10 feeders at \$955 at \$3.80.

Fox & Bishop sold same 2 oxen at \$1,540 at \$3.75; a steer weighing 1,510 at \$4.50; to Mich Beef Co 7 fat cows at \$1,142 at \$3.25, and 3 fair butchers at \$98 at \$2.75.

SHEEP AND LAMBS.

Friday's receipts of sheep and lambs were light, only 268 on sale as compared to 213 one week ago. Part of these shipped through in first hands; few sales reported; unchanged.

Lucke sold Mich Beef Co 10 mixed butchers at \$61 at \$3.25.

Fox & Bishop sold Fitzpatrick 19 mixed butchers at \$94 at \$3.75.

Roe & Holmes sold Robinson 11 mixed butchers at \$70 at \$3.50.

Hornor sold Mich Beef Co 25 lambs at \$91 at \$5.75.

HOGS.

Friday's receipts of hogs 2,444, as compared to 2,061 one week ago. Market active at above quotations. All sold early closing firm. Bulk of sales to-day at \$3.95.

Warren sold R S Webb 84 av 176 at \$3.95.

Roberts & S sold Hammond S. & Co 73 av 201 at \$3.95.

Lucke sold same 52 av 192 at \$3.95.

Hogan sold same 61 av 190 at \$3.95.

Parsons & H sold same 106 av 209 and 106 av 227 at \$3.95.

F W Hornor sold same 87 av 208 at \$3.95.

Bullen sold same 116 av 184 at \$3.95.

Eddy & F sold same 76 av 189 at \$3.95.

Fox & Bishop sold same 156 av 194 at \$3.95.

Wilson sold same 25 av 215 at \$3.90.

Lovell sold same 25 av 185 at \$3.90.

McMullen sold same 141 av 193 at \$3.95.

Hauser sold Parker, Webb & Co 107 av 201 at \$3.95.

Roe & Holmes sold same 37 av 201, 73 av 196 and 52 av 177 at \$3.95.

Jedeled sold same 58 av 214 at \$3.95.

Stage & Cassady sold same 91 av 200 at \$3.95.

Parks sold same 48 av 284 at \$3.80.

Richmond sold same 50 av 208 at \$3.95.

O'Hara sold same 44 av 218 at \$3.95.

Wilson sold Hammond S. & Co 78 av 208 at \$3.95.

McMullen sold same 87 av 211, at \$3.95 and 58 av 176 at \$3.95.

Hailey Bros sold same 145 av 173 and 89 av 179 at \$3.95.

OUR BUFFALO LETTER.

EAST BUFFALO, May 6, 1897.

CATTLE.—Receipts of cattle on Monday last were 5,308, as compared with 5,236 for the same day the previous week; and shipments were 4,278, as compared with 3,850 for the same day the previous week. The market opened on Monday with liberal receipts, and values 10c to 15c lower for medium and heavy steers, while fat butchers' stock, cows, and heifers were steady; bulls were in fair demand, and steady for smooth, fat, desirable lots, while coarse and common were lower; oxen were steady for good fat lots, lower for common. Since Monday the market has ruled steady, receipts being light. As compared with a week ago prices are lower on all steer cattle, both heavy and light, while cows, heifers, bulls and oxen have held steady. Stockers and feeders are again higher, and the demand for them keeps up remarkably well. Veal calves are higher than last week, and milch cows unchanged. Quotations at the close on Wednesday were as follows: Export and shipping steers.—Prime to extra choice steers, 1,250 to 1,400 lbs., \$4.90@5.15; do, 1,200 to 1,400 lbs., \$4.65@4.80; good to choice fat steers, 1,200 to 1,400 lbs., \$4.75@5.00; good choice fat steers, 1,300 to 1,400 lbs., \$4.50@4.65; good to choice fat smooth steers, 1,100 to 1,300 lbs., \$4.25@4.45; coarse and rough fat steers, 1,100 to 1,450 lbs., \$3.50@4.00. Butchers' native cattle.—Fat smooth dry fed steers, 1,050 to 1,150 lbs., \$4.00@4.40; fat smooth dry fed light steers, 900 to 1,000 lbs., \$3.75@3.90; green steers thin to half fattened, 1,000 to 1,400 lbs., \$3.40@3.75; fair to good steers, 900 to 1,000 lbs., \$3.50@3.70; choice smooth fat heifers, \$3.75@4.15; fair to good fat heifers, \$3.30@3.65; light, thin half fat heifers, \$2.75@3.25; fair to good mixed butchers' stock, fat and smooth, \$2.75@3.50; mixed lots, fair quality fat cows and heifers, \$2.25@3.25; good smooth well fattened butchers' cows, \$2.25@3.50; fair to good butchers' cows, \$2.00@3.15; common old cows, \$1.50@2.50. Stockers, feeders, bulls and oxen.—Feeding steers, good style, weight and quality, \$3.80@4.00; fair to good quality stockers, \$3.60@3.75; light, thin and only fair stock steers, \$3.25@3.50; stock heifers, fair to choice, \$3.00@3.40; export weight bulls, fat and smooth, \$3.50@3.75; good fat smooth butchers' bulls, \$3.25@3.50; fair to good sausage bulls, \$2.75@3.15; thin, old, common bulls, \$2.15@2.50; stock bulls, \$2.75@3.15; fat smooth young oxen, to fit for exports, \$3.90@4.25; fair to fairly good partly fattened young oxen, \$3.25@3.75; old, common and poor oxen, \$2.25@3.50. Veal calves.—Common to fair, \$3.00@3.75; good to choice, \$4.00@4.50; prime to extra, \$4.75@5.00. Milch cows.—Strictly fancy, \$3.90@4.50; good to choice, \$3.25@3.50; poor to fair, \$1.80@2.50; fancy springers, \$3.40@4.50; fair to good, \$2.00@3.20; common milkers and springers, \$1.40@1.60. Thursday there were no fresh receipts; the feeling in trade was strong, owing to favorable reports from the west.

SHEEP AND LAMBS.—Receipts Monday were 16,600 as compared with 16,000 the previous Monday; shipments were 9,000 as compared with 11,000 same day the previous week. The market for both sheep and lambs has become stronger since Monday, and on Wednesday there was an advance on fancy clipped lambs, and a slight one on wool lambs and handy weight sheep and yearlings. Heavy export sheep were slow and neglected, and heavy lambs sold at \$4.75@4.90; spring lambs were about steady at \$6.50@6.60 per cwt for fair to choice, but common, light to fair lots are slow, and very common have to be sold in with the culls. At the close heavy stock were dull, good, light and handy sorts were in demand and steady. Quotations at the close on Wednesday were as follows: Native wool sheep.—Choice to extra wethers, \$4.50@4.65; mixed to good, \$2.50@3.25; heavy export sheep, mixed ewes and wethers, \$4.25@4.65. Clipped sheep.—Prime to fancy wethers and yearlings, \$4.40@4.60; good to choice handy sheep \$4.00@4.30; common to fair, \$3.40@3.75; culls and common, \$2.00@3.25. Native wool lambs.—Fair to extra choice, including heavy grades, \$4.40@5.00; culls and common, \$2.75@4.25; yearlings, fair to good, \$4.25@5.25. Clipped lambs.—Fancy handy \$5 to 80 lbs., \$5.00@5.15; good to choice, \$4.75 to 80 lbs., \$4.75@5.00; fair to good, \$4.50 to 70 lbs., \$4.00@4.65; culls, common to good, \$3.00@3.75. Thursday the market was 5c to 10c higher; top lambs, \$5.25; extra heavy grades, \$5; fair to good, handy weights, \$4.80@5.10; sheep, strong; heavy grades wanted; good mixed sheep, \$4.30@4.40; culls, \$3.10@3.60. All offered were sold, and market closed firm.

HOGS.—Receipts of hogs on Monday last were 19,980, as compared with 25,380 for the same day the previous week; and shipments were 13,080 as compared with 12,960 for the same day the previous week. The week opened with an advance on some grades of hogs, but later heavy showed a decline, and are now 5c lower than a week ago, while pigs and prime light are 5c higher, and in good demand. Heavy hogs are dull of sale, and this affects to some extent heavy yorkers. The market as a whole is rather slow, and although receipts were left over unsold, although receipts were quite light. Quotations at close on Wednesday were as follows: Good to choice light medium yorkers, 160 to 180 lbs., \$4.90@4.25; good to choice pigs

and light yorkers, 125 to 150 lbs., \$4.25@4.30; mixed packing grades, 185 to 200 lbs., \$4.15@4.20; fair to best medium weights, 210 to 280 lbs., \$4.10@4.15; good to prime heavy hogs of 270 to 300 lbs., quotable, \$4.00@4.05; rough, common to good, \$3.50@3.75; stags, rough to good, \$2.25@3.00; pigs light, 100 to 120 lbs., good to prime corn fed lots, \$4.25@4.35; pigs, common, thin skippy to fair quality, \$3.75@4.20. On Thursday the market was steady; extreme heavies sold at \$4; medium weights, \$4.05; yorkers, light to heavy, \$4.10@4.25; pigs, \$4.20@4.25; all sold.

CHICAGO.

UNION STOCK YARDS, May 6, 1897.

CATTLE.—The receipts for last week were 50,268 against 46,985 for the previous week, and 56,201 for the corresponding week in 1896. Up to and including Wednesday of this week the receipts have been 27,600, as compared with 36,000 for the same days last week, an increase of about 8,500 head. On Monday there was a large supply, and values declined in consequence. Since that day, however, receipts have been much lighter, and on Wednesday there was an active and stronger market at an advance of 10c. Sales of native beef cattle were made on a basis of \$3.85@4 for the poorest up to \$5.25@5.40 for prime heavy cattle. There was no improvement in the average quality of the offerings, and as choice, matured cattle were scarce sales were largely at \$4.35@4.85, half-fat lots predominating. Heavy cattle are no longer arriving in considerable numbers, and a very small percentage weigh over 1,400 lbs. Butchers' stuff sold better Wednesday than for some days, and fat heifers sold particularly well, the range being \$3.60@4.50. Bulls also sold more satisfactorily, the best exporters going at \$4, and poor bolognas at \$2.50. Calves were active with the best ones in brisk demand at \$5.25. Texas cattle were in fair supply and embraced a large proportion of "crassers." Most of the Texas steers now arriving find purchasers at \$3.60@4.10, fed lots selling around the top. On Thursday receipts were 7,500; the market ruled strong, with some grades higher than on Wednesday. Steer cattle sold at a range of \$3.80@5.25; cows and heifers, \$1.90@4.35; stockers and feeders, \$3.45@4. Market closed firm.

SHEEP AND LAMBS.—Receipts for the past week were 65,111 as compared with 73,380 the previous week, and 73,317 for the corresponding week in 1896. Up to and including Wednesday of this week receipts have been 48,500, as compared with 40,000 for the same days last week, an increase of 8,000 head. The market this week has been in an unsatisfactory condition, with a poor general demand and the top prices realized. Wednesday were \$4.75 for sheep and \$5.30 for lambs. The receipts Wednesday were smaller, being estimated at only 11,000 head, and prices were slightly higher, with a better demand. Sales were on a basis of \$2.50@3 for inferior sheep up to \$4.80@5 for prime flocks with the bulk of the trading at \$3.75@4.75. Fewer westerns

are arriving, and the present receipts consist largely of Texans. Lambs sold freely at \$3.35 for culls and inferior lots, up to \$4.30@5.15 for westerns and \$4.90@5.35 for Colorados. Extremely few sheep are going over \$4.75. Receipts on Thursday were about 11,000; the market ruled steady to strong at Wednesday's prices.

HOGS.—The receipts for last week were 152,021 against 131,284 for the previous week, and 147,551 for the corresponding week in 1896. Up to and including Wednesday of this week, receipts have been 87,600, as compared with 84,832 for the same days last week. Monday's run was exceptionally heavy, footing up 47,597 head, but the arrivals since then have been comparatively moderate. Wednesday's receipts being estimated at 26,000, or about 9,000 less than Wednesday of last week. There was a very good demand, particularly from Chicago packers, and lightweights remained nearly steady, but others averaged a nickel lower. Heavy packing lots brought \$3.45@3.65 and prime light sold as high as \$3.97 1/2, the bulk of the hogs crossing the scales at \$3.80@3.97 1/2, while pigs sold largely at \$3.65@3.95; culls sold all the way from \$1.50 to \$3.40 per hundred. Thursday receipts were 25,000; market ruled active and a shade higher; light, \$3.80@4; mixed, \$3.80@3.87 1/2; heavy, \$3.50@3.82 1/2; rough, \$3.50@3.65.

"TABLE TALK" for May sustains its reputation of being the "Ideal Housekeeping Magazine." Among the many articles that will delight the housewife is the second of a series of articles, the "Garnishing" of dishes, with several illustrations, showing how attractive they may be made. These articles alone are worth more than the price of a year's subscription to this truly helpful magazine. Other articles equally valuable, are "Canning and Preserving" by Mary Joyce, an authority on the subject; "Some Unique Lunches" by Mrs. Kingsland; "Edible Weeds" by Ethel Ramsey, will be of greatest value to housekeepers who take a deep interest in the variety of their table during the early summer months. "Sandwiches and Drinks" by Miss C. C. Bedford, will be sure to be appreciated by all classes of careful housewives. The "Housekeepers Inquiry" Department, the "New Bill of Fare," and other articles not mentioned make this issue worth securing. Price 10 cents. Free copies, however, of other numbers, will be sent to any of our readers by sending their name and address to Table Talk Publishing Co., Phila., Pa.



SILBERMAN

YOUR WOOL

Horticultural.

HELPS AND HINDRANCES TO FRUIT-GROWERS.

Under this title, Mr. Chas. A. Green, the Western New York horticulturist, read a paper before the New Jersey State Horticultural Society, in which he discussed the aids and hindrances to the fruit-grower from the standpoint of the grower himself, and showed a knowledge and appreciation of the business which enabled him to say many things well worth remembering. He said the first help to the fruit-grower was the proper location of his farm, and on this point said:

"A fruit farm need not be located close to a large city. My experience has taught me that a large quantity of small fruits can be marketed to farmers and villages. I have obtained higher prices in villages, twelve to eighteen miles out of Rochester, than I could have secured at Rochester. I have found less competition in such villages than in large cities.

"If you can locate your fruit farm near a large body of water, you will find such water protection of great service. As I drive towards Lake Ontario from the south, I often find no fruit until I get within two or three miles of the lake, the fruit blossoms inland having been destroyed by late spring frosts, or by sudden changes during the winter, which have not occurred along the lake shore.

"It is a great help to have the fruit farm situated on an elevation and on rolling land, which gives free atmospheric ventilation and exemption from injury by frost, and a great help also is to have the fruit farm naturally fertile. At the present time we can buy rich soil cheaper than we can make poor soil rich by applying purchased fertilizers."

The advantages of a business training were commented on, and Mr. Green does not estimate too highly its value to the fruit-grower. It is a great help, he said, to the fruit-grower to have had business training, or practical business experience. The marketing of fruit, especially in seasons of great plenty, requires business ability. One trouble with farmers is that they often have had no business training, are unfamiliar with business, and therefore easily duped by swindlers. Such men often suffer from lack of good business methods.

On the subject of hindrances he mentioned several which are common to everyone engaged in the business, no matter where located. He said on this point:

"There are many hindrances, which are, in a measure, also helps; therefore, I find it difficult to classify these two questions under different heads exclusively. There is no doubt in my mind that the work of insects and fungous diseases, while a hindrance to an unprogressive fruit-grower, may result in helping those who are diligent and well informed, by giving such progressive fruit-growers almost the entire sweep of the markets.

"I wish I could say that the result of bad packing and the assorting of fruit was a hindrance that resulted in helping those who are efficient, but I cannot say that this always results in such a desirable manner. Western New York, this season, has harvested the largest crop of apples ever grown here. The average grading of this fruit has been done very poorly. There are few men, even in this fruit-growing section, who are capable of properly assorting a large orchard of apples, and placing them in market. If one man could do all the work it would be different; but since one man must manage several, and all have not the ability to manage help, the result is disastrous to the majority of farmers, as they know little about the question of assorting.

"What is the result of all this? Answer. The market is overwhelmed with apples which cannot be branded as good or bad. Buyers at distant points who desire a carload of superior apples cannot send to Rochester, or Lockport, or Newark, for they suspect that they may get carelessly selected fruit, unless they happen to know some orchardist whom they can depend upon. Since they do not know anyone they can depend upon they do not send their order, and this patronage is lost.

"I know of two large apple-growers, neighbors, the farms being divided only by the highway. One of these men assort his apples with the greatest care, rejecting at least half of his crop as second class, selling that class for what it will bring; while the other neighbor over the way is a poor grader, putting many apples in as first-class which do not belong there. One year ago a Rochester buyer bought both these orchards of fruit, and paid the same price for both crops. From that purchased of the good grader the buyer made a handsome profit. From the fruit bought of the poor grader he lost money. This year he bought the fruit of the man who graded carefully, paying 65c. per barrel, the lowest known rate at that time. He did not buy the fruit of the neighbor who packed poorly, but that neighbor sold his apples at 65c. to another man. Query. Does it pay to pack fruit properly in Western New York? My answer is, yes, it pays, but the man who carefully grades his apples should have the business ability to demand and secure a price worthy of his grading. This business ability the man who graded well did not possess. He should have placed his apples in our cold storage house and sold next May or June at \$2 per barrel. The expense would have been 45c. per barrel."

Of the helps, he spoke of the agricultural

and horticultural press, which he referred to as both a help and a hindrance, and the experiment station. He said of the press:

"I mention with considerable enthusiasm and confidence as one of the helps to fruit-growers the agricultural and horticultural press. These papers keep the fruit-grower posted on the markets, on new varieties being tested throughout the country, or old varieties that are being discarded, and also give hints and suggestions in regard to methods of culture. But at the same time these journals are at times a hindrance to fruit culture. I am an editor myself. Some months ago I received a letter from a man on the Pacific coast informing me that he was a reader of my paper; that he had followed instructions printed in my journal, and that thereby he had injured his orchard. I cannot now recall precisely what the circumstances were, further than the advice given was suitable only to a certain section of the country such as the Atlantic coast, or something of that character. I wrote this gentleman that I was grieved over his misfortune. I warned him that the man who reads must be wise in order to gather from that which he reads only helpful suggestions. Surely a fruit-grower cannot follow blindly anything or everything that is recommended, or suggested, in the agricultural or horticultural press. He must sort out the wheat from the chaff. There are many writers who have no experience, and their writings are simply speculations or theory. The reader must know something of the writer, if he is to follow his instructions. He must also know of what section of the country the writer is speaking, and of the various conditions."

Referring to experiment stations he said: "Our State experiment stations should be much more helpful than they are to the fruit-grower. Fruit-growers do not avail themselves of the advantages offered by these stations. During my visits to our station at Geneva, New York, I have been greatly interested and aided by visiting the experimental beds of strawberries. I have often seen as many as one hundred new varieties in fruit on the same bed the same date. This gives one a marvelous opportunity for becoming informed in regard to the value of the newer varieties. The same is true of currants, gooseberries, blackberries, raspberries, of apples, pears, plums, and other large fruits. On inquiring at the station whether visitors were numerous, I was told that they were not, and that practical fruit-growers were very seldom seen on those grounds. Of course the experiment station issues bulletins which are helpful, but are not nearly so much so as would be a visit to the grounds during the fruiting season."

In concluding his paper Mr. Green pointed out several helps which every fruit-grower can avail himself of whenever he desires, and said:

"Another great help to fruit-growers is occasional visits to other fruit-growers in their own locality, or in other states. I have never talked with a practical fruit-grower, no matter how humble, without learning something. I have never visited a fruit farm, and walked over the place with the proprietor, without feeling repaid a hundred fold. But fruit-growers are busy people and seldom spend a day or a week in studies of this character. I am often asked by people in other States what to do or what to plant, but people of your own State should be far better informed than any person in another State.

"A fruit-grower can learn much by going into the city markets where his fruits are sold, or those of his contemporaries, very early in the morning, and looking over the various loads of fruit, and questioning the men who are met with in the market, both sellers and buyers, learning in regard to the most desirable packages, the most desirable varieties, the best methods of gathering, sorting, packing and marketing.

"The United States Department of Pomology at Washington, D. C., is fully equipped for helping the fruit-grower. Many people write me from various parts of the country, asking questions about insects and diseases, which I am not qualified to answer, since no one person can be an expert in every part of this great field. Many people do not seem to know that they, with others, are supporting some of the best experts in the country at Washington, whose duty and pleasure it is to answer such letters, and to give all the information in their power. It seems to me that it would be well for every horticultural society, and every agricultural paper to call attention to the fact that the government is supporting an institution of this kind expressly for the purpose of assisting farmers and fruit-growers. I have made personal visits to the department at Washington. I have found the men well informed, each one a specialist in the department under his control. These men are affable and courteous, and none will call upon them, or write them for information, without receiving prompt attention."

PRINCIPLES OF PRUNING.

[By Samuel B. Heiges, Pomologist U. S. Department of Agriculture.]

So many inquiries as to times and methods of pruning have been received that a statement of the general principles seems imperative.

Granting that properly grown trees have been obtained from the nursery, it is possible to properly train a tree by using the fingers and pruning knife only. Persons, however, often obtain possession of orchards the trees of which have been neglected for years, or have planted trees that have not been properly trained from the time of planting.

Under either condition the use of the saw will be necessary. An ax or hatchet should

never be used, as the wound will not be as smooth as can be made with a sharp, fine-toothed saw.

It is essential that the head of the tree should be open for the free admission of air and sunlight in order that the fruit may be perfectly colored and of fine flavor. The actinic ray of sunlight is essential for this purpose for maintaining the health of the foliage, without which perfect fruit cannot be produced. Hence all limbs that cross each other, which by their motion produced by the wind would abrade the bark, prevent free circulation of sap, and engender disease must be removed.

If the trainer of the tree had a just conception of the form that the tree should assume at maturity, the removal of these limbs could have been obviated by removing the buds, which are the incipient limbs, by finger pruning or by pruning knife. A bud removed in May will render unnecessary the removal of a limb in December.

As there is a correlation between the roots and branches, it is essential that the foliage be abundant and healthful, in order that the roots may be developed and furnish nourishment from the soil for healthful development of foliage, wood, and fruit.

It is equally necessary that the foliage be healthful and abundant, for the double purpose of obtaining food from the atmosphere and eliminating the nonessential and injurious elements furnished by the roots in the form of sap.

It is a well-known physiological fact that a weed or any other plant may be eventually killed by constantly removing the leaves as they appear. Leaves in vegetable economy perform a function very similar to lungs in the animal economy. Hence summer pruning is to a certain extent a weakening process in the growth of a tree. This process will often induce a tree that would otherwise be possessed of a vigorous growth to produce fruit the following year.

Winter pruning, on the contrary, will produce an increased growth of wood the following season and may arrest the formation of fruit buds. Hence it is an axiom now becoming recognized that "summer pruning weakens growth, while winter pruning produces the contrary effect."

Repeated observations have established the fact that although the surface soil may be frozen that portion in immediate contact with the roots, from the vital heat of the same, is in such a condition that food is still absorbed and distributed through the branches, ready to be converted into fruit or wood through the influence of the forthcoming foliage.

If pruning is delayed until spring, this accumulation is cut off and thrown away.

Trees often show a tendency to develop strong central shoots at the expense of the lateral ones. This can be controlled by pruning the strong shoots in summer and the weak ones in winter.

Wounds made by pruning will heal over more readily and rapidly if made when the tree is at its height of summer growth. Wounds made in the winter are exposed to the high winds of that season and of the spring also, and sap secreted for the purpose of healing the wound is lost in the atmosphere. This should be corrected by painting every wound of more than one-half inch in diameter, no matter when made.

After a thorough trial of grafting wax, shellac, clay, etc., I found nothing equal to red lead and boiled linseed oil. This will last longer, and is more resistant to water than any other mixture in general use.

Those who object to the bright red color of this mixture can, by mixing with it a small quantity of lampblack, closely imitate the natural color of the bark.

Thousands of trees have come under my observation showing decay of trunks and branches through the neglect of covering the wounds with some substance impervious to water.

When it becomes necessary to remove a large limb that has become broken by high winds or the neglect to remove an excessive crop of fruit, the proper plan is to saw the limb at least two feet beyond the final point of removal, thus removing the great weight which is likely to cause the tearing of the bark upon the lower side of the limb, often extending into and down the trunk. A second cut can now be made at the proper place without any danger. When we consider the many years required for certain fruit trees to reach maturity, this precaution in pruning is a wise expenditure of time and labor.

To recapitulate:

- (1) Train the tree so that only dead and injured limbs need be removed in future years.
- (2) Use the fingers and pruning knife in shaping the tree and thus save the use of the saw.
- (3) Prune weak growth in winter.
- (4) Prune strong growth in summer.
- (5) Pruning by improper methods and at improper times will prevent the formation of fruit spurs upon such trees as fruit by that method.
- (6) Never fail to protect every wound of more than one half inch in diameter from the influence of the weather by means of paint or some other suitable material.
- (7) Study your tree thoroughly before you prune.

The export trade in apples is about over for the season. Other fruits from southern Europe are taking their place.

Health and vigor are essential for success. Therefore make yourself strong and healthy by taking Hood's Sarsaparilla.

AN APPLE PRESERVER.—C. B. Wright, Belmont, O., advertises, in this issue, an apple preserver, and if it is what he claims for it, it will be of great value to apple growers. A box of apples, which were preserved by this method, arrived at THE FARMER office April 29, and every apple was as sound and perfect as when put up last fall.

An Ounce of Prevention

—you know the rest. In this case it consists in taking a few bottles of that thoroughly reliable lifesaver

Warner's Safe Cure

After the long winter of inactivity you may find the spring work and the hot sun more than you are able to bear. You may be debilitated; your liver may not be working well; you may have dyspeptic tendencies. The above remedy will fix you up and make you feel good as new. It is an infallible cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA**

It is entirely a vegetable compound. Beware of substitutes. There's nothing so good as Warner's Safe Cure.

FRUIT TESTS AT SOUTH HAVEN.

Bulletin 143 of the Michigan Experiment Station, contains the report of fruit tests at the South Haven Station, conducted by T. T. Lyon, Ex-President of the State Horticultural Society. The bulletin is intended to give experiences with different varieties of fruits, as a guide to the grower when making his selection; but it also gives the methods pursued in their cultivation, and means taken to avert or remedy the attacks of injurious insects and fungi, and we take extracts from the bulletin detailing the methods. Mr. Lyon says of the season:

As during the years 1894 and 1895, so during the spring of 1896 there was no adequate rainfall in this immediate vicinity until the middle of July. This necessitated hauling water by team for irrigating such plants as were not well established. This continued until July 7th, at which date the mains of the village water works became available, and a permanent supply upon the premises was secured, although the use of a team with barrels was yet necessary when water was to be applied beyond the reach of a hose. Since the occurrence of the copious rains, above referred to, however, resort to the artificial application of water has rarely been found necessary.

For the double purpose of subduing weeds and maintaining a surface mulch of mellow earth, free use has been made of the cultivator among the older trees, and of a fine toothed one among younger trees and small fruit plants, especially after the occurrence of rain. This was continued until about the middle of August, after which all cultivation was discontinued, except in a few special cases.

The entire plantation was sprayed in early spring, while growth was yet dormant, with a solution of a pound of copper sulphate in twenty-five gallons of water. This was applied to gooseberries and currants (which start very early) on March 10th, and to all other small fruits prior to April 17th. For the purpose of comparison, only alternate trees of the cherries, peaches and plums, in the southwest block were treated, commencing with the first. Later examination shows a slight difference only, in favor of the sprayed trees, in a few cases.

Subsequent sprays were applied at sundry times during the season for various purposes. These will be noticed under the heads of the several fruits to which such applications were made.

STRAWBERRIES.—(*Fragaria*).—Both plats were sprayed between April 13th and 17th last, with a solution of one pound of copper sulphate in twenty-five gallons of water. After the fruit had been gathered the 1895 plot was sprayed, to prevent rust, with a solution of one pound of copper sulphate in two hundred and fifty gallons of water; and the 1894 plat was plowed under, preparatory to seeding at the proper time, with crimson clover.

So far as the strawberry plats are concerned, no insects have proved troublesome during the season.

RASPBERRIES.—(*Rubus*).—Between April 11th and 13th both the old and the new plantations of the raspberries (including blackberries also), were sprayed with a solution of a pound of copper sulphate in twenty-five gallons of water.

As a preventive of anthracnose, the raspberry and blackberry plats were again sprayed, on May 16th, with Bordeaux mixture of standard strength.

On June 10th raspberries and blackberries were again sprayed for anthracnose,

using a solution of three ounces of copper sulphate in fifty gallons of water. These two sprays have apparently proved quite effectual, since very little of the fungus is now (Oct.) perceptible.

Insects have not, this year, proved troublesome upon the raspberry, although occasional deposits occur of the eggs of the snowy cricket—(*Ecanthus niveus*).

BLACKBERRIES.—(*Rubus villosus*).—Anthracnose has been the only troublesome fungus during the season; but the treatment described under the head of raspberries has apparently very nearly subdued it. A few cases of red rust were discovered, and the plants were at once dug and burned; since which no farther cases have been discovered.

Of insects, the leaf miner, *Tischeria malifoliella*, Clemens, has been increasingly prevalent. The process of gathering and burning the affected foliage has again been resorted to. Later their work has again become apparent; and the gathering and burning process has been repeated. Results, so far, indicate that a more effective process is needed for their extermination. With the above exception, insect pests have not proved troublesome during the season. Warm weather during the early part of the season shortened the fruiting season of some varieties, limiting both size and quantity of the fruit, though timely rain somewhat revived others, continuing their season and increasing their yield of fruit.

CURRENTS.—(*Ribes*).—March 30. Sprayed currants (in connection with gooseberries), with solution of one pound of copper sulphate in 25 gallons of water.

April 30. Sprayed currants and gooseberries, to prevent mildew, using one pound copper sulphate in 500 gallons of water.

May 6. The currant worm, *Nematus ventricosus*, having appeared, both currants and gooseberries were sprayed with one pound of Paris green in 250 gallons of water.

May 15. To subdue the currant worm and mildew, currants and gooseberries were again sprayed, using Bordeaux mixture of standard strength, with the addition of $\frac{1}{4}$ pound of Paris green to 50 gallons.

June 1. Currants and gooseberries were again sprayed, for worms and mildew, using three ounces of copper sulphate and three ounces of Paris green in 50 gallons of water.

June 10. Repeated the spray upon currants and gooseberries, for worms and mildew, using the same preparation.

June 18. Sprayed gooseberries for mildew, using three ounces of liver of sulphur, potassium sulphide, in ten gallons of water.

July 10. Gooseberries were sprayed for mildew, with one pound of copper sulphate in 250 gallons of water.

August 4. Sprayed currants and gooseberries for mildew, with one pound of copper sulphate in 200 gallons of water.

More or less mildew has appeared upon several varieties of gooseberries of European parentage, due, probably, to too long periods between spraying, which were, in several cases, deferred on account of the prevalence of rain or high winds.

The twig borer, *Aegeria tipuliformis*, has apparently been less prevalent than heretofore, although the extent of its depredations may become more fully manifest during next spring's pruning.

Aside from those mentioned, no other insects have proved troublesome.

GOOSEBERRIES.—(*Ribes*).—Necessarily, more or less small, weak plants were used in making the new plantation of gooseberries last year, and, of several scarce varieties, the stand is even yet not full. Such being the case, at least a year or two must necessarily elapse before such plants can be expected to yield competent returns for purposes of comparison.

CHERRIES.—(*Prunus*).—The trees were yet dormant on April 14, when they, in common with the entire plantation, received the spray of strong solution of copper sulphate.

Cherries have been exempt from the attacks of fungi, so that no farther applications of fungicides have proved needful.

June 11. The slug, *Etiocampa cerasi*, having made its appearance, the trees were treated with a spray consisting of a tablespoonful of buhach in a gallon of water, which proved effective for the time. A new colony appearing, another spray was applied on the 15th to the 20th, consisting of a strong decoction of tobacco stems in water, which proved thoroughly effective.

The slug proving unusually persistent, the tobacco decoction was again applied on June 20, and, for yet another visitation on August 21.

Except as already specified, no insect attacks have been observed. The curculio which frequently visits the fruit, seems to have confined its depredations to the plums and early peaches.

PEACHES.—(*Prunus*).—With peaches, as with other portions of the plantation, the needful pruning was done during intervals of mild weather in February and March.

In common with the entire plantation, they were treated with a spray of strong copper sulphate (one pound in 25 gallons of water), on April 14th to 17th, while growth was yet dormant.

This early treatment, so far as the peach was concerned, was mainly intended to act as a preventative of leaf curl, *Taphrina deformans*. Owing, doubtless, to the peculiarity of the season, this precautionary treatment was apparently unnecessary, since, without regard to spraying, the entire locality has been partially, if not wholly, exempt from this malady this season.

In the absence of other attacks of fungi, no other applications of fungicides have been found necessary.

May 5. Commenced examining peach trees to destroy such borers, *Aegeria exilis*, as had escaped detection during the examinations of last September. Finished such examination on the 12th, finding an occasional larva.

May 14. Commenced jarring trees for curculio. Its depredations upon the peach were very slight, and, as usual, mainly confined to the early and comparatively smooth-skinned varieties, while even upon these, so few insects were caught that examinations were soon abandoned, so far as the peach was concerned, and thereafter the jarrings were confined to the plum.

Experience here quite clearly indicates the wisdom of planting plums and peaches adjacent, and using the former as a curculio trap.

The Rose Chafer, *Macrodactylus subspinosus*, has been less troublesome than heretofore, only a very few having been discovered; an occasional one only upon the peach.

Within the last three or four years a new insect enemy has appeared in the peach orchards of this vicinity, attacking the trunks and larger branches of bearing trees. The eggs are deposited upon the bark and, when hatched, the larva pierces the wood, making channels through and through it, which outwardly appear as if occasioned by the firing of a charge of small shot, with very serious and ultimately fatal effect upon the vigor and health of the trees attacked. As soon as discovered last year a coating of soap, lime and a little carbolic acid was applied to the trunks and larger branches to prevent, as far as possible, the depositing of the eggs. The above mixture was again applied on May 20, 1896. A considerable number of the older and more enfeebled trees have already been dug and burned.

GRAPES.—(*Vitis*).—The fact will doubtless be recollected that, during the spring of last year, a severe frost occurred, after the growth of the young canes was well advanced, which nearly or quite ruined the incipient canes. The injured canes were allowed to remain; and many of the buds upon them subsequently developed new canes. These, together with the additional canes subsequently produced from the old wood, soon multiplied the number of young canes beyond the ability of the plants to produce strong fruiting wood for the following year, rendering it highly probable that the better practice would have been to entirely remove the injured growths, and depend wholly upon new growths from dormant buds. Many of the weaker canes were cut away when the error became obvious, although too late to insure the best results.

The crop of this year has apparently been considerably diminished from this cause.

The spray of copper sulphate (one pound in twenty-five gallons of water), with which all dormant plants were treated, was applied to grapes on April 15th.

On June 12th, grapes were sprayed, to prevent anthracnose, with a solution of one pound of copper sulphate in 200 gallons of water.

On July 11th to 21st, finding indications of mildew, grapes were again treated with a solution of one pound of copper sulphate in 250 gallons of water.

Mildew proving unusually persistent, the latter solution was again applied on August 4th and 5th, and again on the 13th. No attacks of either fungi or insects have proved troublesome, beyond those already specified.

PLUMS.—(*Prunus*).—Whether caused by the copper sulphate spray applied in April to plums in common with all other fruits, or from other cause, the plum trees have been notably exempt from the attacks of fungi, except that there was a very considerable loss of fruit from rot (*Monilia fructigena*) during the month of September, this being its first appearance upon the plum upon the station grounds, although it had been slightly noticeable, a year earlier, upon some of the earlier peaches.

The crescent of the curculio was observed, and the jarring process commenced as early as May 14th, finding a good many insects. The jarring was continued, except during high winds, till June 12, when the insect had disappeared.

The first rose chafer (*Macrodactylus subspinosus*) was discovered on May 27, and a few as late as June 5, after which date no more were seen. A few were caught upon roses, though they have been conspicuous this year by their absence.

This year's crop of plums was comparatively light, due doubtless to the excessive crop of last season.

PEARS.—(*Pyrus communis*).—The spray, with a strong solution of copper sulphate, applied while growth was yet dormant, has apparently sufficed to prevent the attacks of fungi upon the pear. No treatment, for this purpose, has since been found needful.

To prevent the depredations of the codling moth (*Carpocapsa pomonella*), a spray of Bordeaux and Paris green was applied on

May 11, using three ounces of Paris green in fifty gallons of Bordeaux.

On May 23 pears were again sprayed for codling moth, using one pound of copper sulphate and three ounces of Paris green in 250 gallons of water.

Trees were sprayed the third time for codling moth on July 3 to 7.

Strong tobacco decoction was applied to destroy slugs (*Etiocampa cerasi*) on June 9, again on June 15 to 20, on August 12, and finally on August 21.

APPLES.—(*Pyrus malus*).—Apples, while yet dormant, were on April 13th to 17th treated with the strong solution of copper sulphate, in common with other fruit trees.

Bordeaux mixture with Paris green was applied for codling moth on May 11th to 19th, the treatment having been delayed by high winds.

On May 23d to 27th the treatment was repeated, using one pound of copper sulphate and three ounces of Paris green in 250 gallons of water. This treatment was again applied on June 11th, and a final spray of the same was given on July 3d.

These several treatments appear to have been thoroughly effective against the attacks of fungi, though, possibly consequent upon delayed treatment during windy weather, they were but partially effective against the codling moth.

Tobacco decoction, made by digesting tobacco stems for several hours in cold water sufficient to cover them when slightly weighted, proves to be a specific against aphides. These have been rather persistent this season. In subduing them, this spray was first applied on July 8th to 10th, and again on the 25th.

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Is it any wonder, therefore, that the doctor fails to cure the disease?

Still, we cannot blame the woman, for it is very embarrassing to detail some of the symptoms of her suffering, even to her family physician.

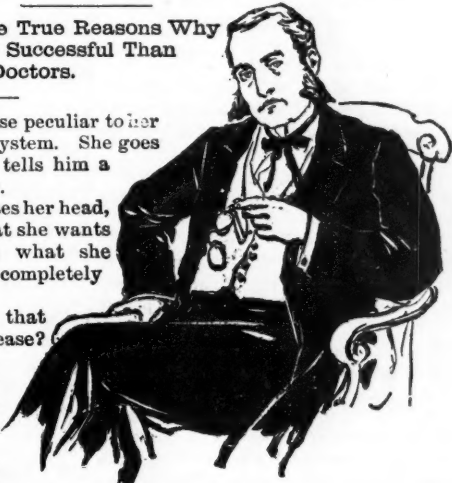
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PETITIONS AND THE COUNTY SALARIES BILL.

Readers of the Legislative Journal during the last three weeks have noticed, printed in the Senate proceedings, a record of numerous petitions against the passage of the "Kimmis Fee Bill."

The question is being repeatedly asked, What effect will these petitions have on the action of the Senate regarding the measure?

We cannot believe the measure is in danger, and the following are our reasons: 1st. Ninety-nine per cent of the people of the State, and indeed of the entire country, are opposed to the out-of-date, extravagant and iniquitous fee system of paying county officials.

2d. So general has this feeling become, that the fee system has, within the past ten years, been practically abolished by the general government, and the officials thus paid, nearly all placed upon a businesslike, salaried basis.

3d. Several states, notably New York, have already abolished the fee system of paying county officials, and have demonstrated the fact that hundreds of thousands of dollars are annually saved to the taxpayers of the state by so doing, without lowering the standard of service in the offices.

4th. The Kimmis County Salaries Bill represents the deliberate judgment of ninety-nine per cent of the taxpayers of the State as to the best means of disposing of the problem in Michigan.

5th. The Senate has simply to choose between an indefensible, out-of-date, extravagant and unbusinesslike system, advocated by the one per cent—the officeholders and office seekers and their friends—and the practical and businesslike method of paying definite, fixed salaries for definite, stated work, advocated by the ninety-nine per cent of the people—the business men, the taxpayers, the practical people who have no axes to grind or no personal ends to serve.

Such are the facts in the case. As to the petitions against the measure, every one of them bears evidence of having been inspired by the officeholding class.

We base this opinion on the following facts: 1st. The remonstrances, without exception, are double-headed. They are against the passage of the Wagar Salaries Bill and the Kimmis Fee Bill, establishing the fact of a union of forces by the county officers and State office appointees, to maintain exorbitant salaries.

2d. These petitions, for some reason known only to the petitioners, uniformly refer to the measure as the Kimmis Fee Bill, whereas the measure is, and has been, generally known as the Kimmis County Salaries Bill, and neither establishes nor makes possible any more fees, but simply provides that the fees already provided for by law shall no longer go into the private purses of the officeholder, but into the general treasury.

3d. The petitions bear no evidence of a popular movement against an objectionable measure, but rather smack of machine-made opposition to a popular movement.

In striking contrast are these petitions with the spontaneity and perfect freedom from machine methods so plainly manifested in the popular petitions of the farmers and all other business men in support of the measure.

The people understand the situation thoroughly. It is an out-and-out contest for supremacy between themselves on the one side, and the officeholding class on the other. And the senators are to pass judgment in the matter.

There can be no doubt as to the result. The Senate knows that the people are in earnest in this matter, and that no compromise will be accepted. They further

know that the people are absolutely in the right, and the officeholders absolutely in the wrong in their respective positions. And best of all, and most important of all, the Senate is largely made up of conservative men who have many long years of business experience behind them, and such men may safely be depended upon to do all in their power to place the county offices on a practical, business basis.

OUGHT THE UNIVERSITY TO ASK FOR AND RECEIVE ADDITIONAL APPROPRIATIONS?

In view of the fact that when the University asked that the regular appropriation for its support, of one-twentieth of a mill, be increased to one-fifth of a mill, it was well understood that, if this was done, no additional appropriations would be asked for, and in view of the additional fact that the income of the taxpayers of the State in general is much decreased, and of the farmers especially can it be said "times are close," is it right and just on the part of the University to ask for increased appropriations?

While all were prosperous and "times were good," generous expenditures for State institutions were willingly granted, even to the extent, in some instances, of extravagance. But now, while "times are close," this very proper request is made of the University, that it share with us in these—enforced restrictions.

If it will do this, the interest in, and sympathy for, its aims and work will be enlarged and will bear fruit in the future. "Higher education" is dear to the farmers of Michigan and loyally will they give it support, provided always that it does not come too high and so become too dear to the taxpayer. The question—taken in all of its bearings—is one of no small importance, and in justice to all parties concerned, it should receive careful and just consideration.

Looking at the matter from one standpoint, the question arises: If no additional funds are provided, will the work of our State University be seriously retarded and will permanent injury result thereby? Again, if more than the permanent income is needed, is there no way whereby this need may be met, save by the placing of this additional burden upon the taxpayer?

Are there not those connected with the University, and others who have received of its benefits, whose friendship for, and whose interest in, the University is of that quality which will cause them to render assistance at this time by a personal contribution of money, or by the acceptance of a less salary than is now being received?

Let the University—indeed let every State institution—at this time carefully distinguish and separate its "wants" from its "needs." Ought not, then, the present conditions under which a large portion of the people of the State are laboring, to be taken into careful consideration before any additional requisition is made upon the State treasury for funds with which to enlarge the equipment and extend the work of the University? Someone—evidently possessed of leisure—has "figured out" and published a statement of the amount of tax, on \$1,000 of valuation, required by the one-sixth mill tax. But this effort and time is all lost, for no one is raising any objections to the one-sixth mill tax. It is the granting of any additional sum which is objected to, and valid reasons sustain the objections.

Is not this question opportune at this time? Ought the State to provide, by the taxing of its citizens, educational facilities for the people of other countries and other States?

But there is one view which it is very proper and important to consider in its bearings on this matter, and which, perhaps, is being ignored. The act of the legislature (Session laws of 1893, page 20) increasing the permanent appropriation from one-twentieth to one-sixth of a mill on each dollar of taxable property of the State, clearly intended that no further appropriations should be granted to the University. This intention of the act is shown more clearly in the concluding paragraph, which reads as follows: "Should the board of regents fail to maintain any of said departments, as herein provided, then, at such time shall only one-twentieth of a mill be so assessed."

J. T. DANIELS.

REPORTS FROM LOCAL CLUBS.

SOUTH FULTON FARMERS' CLUB.

This club met at the home of T. J. Hoxie, April 8th, and to say we had an interesting meeting is stating facts in a very mild form. After the opening exercises A. Stead read a selection from the MICHIGAN FARMER.

L. Bently then read a paper entitled "Whither are we drifting as a nation?" in which he scoured the combines and trusts, saloons, etc. The paper was well received and thoroughly discussed.

After the general exercises of the afternoon session were disposed of, the Mortgage Tax law was taken up. The subject was opened by Mrs. Herman, who, among other things, said we should have a uniform rate of interest, and to do this would call for an amendment to the Constitution, and this brought out the question of state rights. Mrs. Sciles said by farmers paying taxes and interest they pay for use of money twice. All talked on this question,

and at the close of discussion a resolution was adopted opposing the repeal of the mortgage tax law.

Adjourned to meet with Mr. and Mrs. L. L. Smith, the second Thursday in May. F. H. C., Rec. Sec.

DEERFIELD FARMERS' CLUB.

The Deerfield Farmers' Club, of Isabella county, met at the home of John Boettner on April 15th.

The topic, "Our highways and how to improve them," was led by F. N. Boyden, who thought the government should furnish the land for the highway instead of the individual. He was followed by others.

Mr. Tapley had seen hundreds of miles of stone road in Canada, and they were always dry. They were made by digging out eight inches of the top of the roadbed and filling it with stone which were broken fine. They were too expensive for this country. All agreed that gravel makes a good road if put on thick enough so that the wheels would not cut through.

A communication from the Association secretary was read. It was voted to again join the State Association.

A copy of the "Wagar Bill" was read and resolutions passed favoring its passage; also a petition circulated.

The topic, "The farmer's wife; her labor and reward," was led by Mrs. Ella A. Coomer in a well-written paper.

Mrs. S. Tapley also had a paper and said many good things: That the mother was the light of the home, and also that the prosperity or disgrace of each individual member of that family was the joy or disgrace of each of the other members of that home.

Mrs. Wm. Salisbury read a good selection upon the topic. The discussion then became general. Mrs. George D. Brown suggested that the wife and mother should begin the day with a smile and try to make others cheerful.

The next topic was "How to raise a calf until it is one year old to be of the most profit." T. B. Boyer led this subject and said this was the beginning of stock raising. The calves should have the best feed and care that it was possible to give them. They should have the best pasture and plenty of room for exercise and an abundance of fresh water, and when being stabled they should be kept loose and have the best of feed until they are one year old or we may stunt them.

Mr. C. Coles said we should feed meal and clover hay. He had known of good calves being raised upon meal and rutabagas. George D. Brown said that Mr. F. Rhodes, who was to have led this subject, was a very successful stock raiser and fed his calves oats; as soon as they would begin to eat a little hay he would begin to give them a few oats. He had worked two hours to get the calves to eat them, but he succeeded and had fine large calves and they made fine cattle and he always got a large price for them.

"Remarks for the good of the order" was led by J. C. Wood; said we should be regular in our attendance, we should avoid all personalities in our remarks. Should try and have a well filled mind rather than run after fashion and finery.

Mr. Brown suggested that the members furnish the program committee with timely topics.

The question box was next in order and was very interesting.

N. V. COOMER, Cor. Sec'y.

SOUTH JACKSON FARMERS' CLUB.

It's a beautiful world we live in. Saturday, April 24, was one of its fairest days—a typical April day with alternate sunshine and showers and warm, balmy air laden with that fresh scent of early spring. Its beauty found an echo in the hearts of all who wended their way to the delightful home of Mr. and Mrs. Seymour Smith to attend the meeting of the South Jackson Farmers' Club.

Pres. Hammond called the meeting to order at the usual hour. It was moved and supported that the secretary prepare blanks for the use of the viewing committees. Motion carried, and suggestion made that hereafter such committees report conditions "just as they find them." The motion to raise the annual dues was taken from the table and lost, after considerable debate. The fact was elicited that the club has an enrollment of 56 members in good standing.

After partaking of a most bountiful dinner and spending some time in social converse, Pres. Hammond again called the meeting to order and the members settled themselves expectantly to listen while Mr. S. A. Strong opened the topic for discussion: "Should mortgages be taxed?" Mr. Strong is heartily of the opinion that they should. Many say that such a law cannot be enforced and by so saying they confess that the worst element of our country is in control. It is the money power that is not in favor of such taxation. Let mortgages be taxed.

L. M. Rhoades thinks that the method of taxation is at fault. The lender should pay the tax, else there is double taxation. Base the methods of taxation upon the principle of justice and equality to all and exempt no species of property from taxation.

Mrs. Jennie Ford spoke of the time when our money lenders refused to loan money for less than 10 per cent. The legislature passed a law making 8 per cent the legal rate and declaring it usury to exact a higher rate. That law was effective. Would it not be wise to have a similar law in regard to the taxation of mortgages?

Mr. Strong wished to say a word farther and declare that the man who, having money at interest, says "no" when asked if he has, should be prosecuted for perjury.

R. D. M. Edwards believes that all property should be taxed equally. So many of us do not study the questions of the day as we should. The phraseology of the law

needs careful scrutiny and it sometimes happens that we vote down measures that would be for our best interests and for which we have even been asking. Thereupon the club promptly deserted its "text" and went into a discussion of the recent amendments voted upon at our last election, in which Messrs. Strong, Howe, Neely and Hammond took active parts. Mr. Hammond finally brought the discussion to a close.

Miss Helen M. Carpenter read a paper upon "The curfew law," and an earnest discussion ensued. Mr. Strong declared such a law a relic of the Dark Ages and an outrage to liberty-loving people. John Neely supported Mr. Strong's views, and told the club how he'd train his children if he had any. Mesdames Reed, Kipp, Ford, and Miss Hatch argued in favor of the law, and Mr. Edwards brought out the point that such a law would affect only those who are not training their children rightly. The general sentiment seemed rather in favor of the law, especially in places where roaming the streets is a common practice and the morals are pretty bad.

The viewing committee reported that the farm contains forty acres all under a high state of cultivation. There was produced last year, of wheat, 305 bu.; oats, 233 bu.; potatoes, 15 bu., and hay, 15 tons. The fences and buildings are very good, and the report closed with the sentence "The house is kept in perfect order."

The program for the next meeting was read and approved, and the questions for discussion will be: "Would it be advisable to grant the request of the supervisors and vote them \$15,000 to build a new court house?" to be opened by John Neely, and "Which is most responsible for a man's moral character, the mother's teachings, the father's example, or the force of heredity?" to be opened by Mrs. Milton Reed.

This closed a very successful meeting, and the club adjourned to meet again on May 29th, at the home of Mr. and Mrs. John Cain.

HELEN M. CARPENTER, Reporter.

CENTRAL FARMERS' CLUB.

The April meeting was held at the residence of E. C. Read in North Plains township on the 14th inst. The Mortgage Tax Law was quite thoroughly discussed and the prevailing opinion seemed to be that the present law, although defective, is better than no law at all. The following resolution was passed:

Resolved, That the Central Farmers' Club, consisting of forty-eight members, is not in favor of the repeal of the mortgage tax law.

A paper, "A day's work in a farm house," written by Mrs. F. Bolender, gave a clear description of the manifold duties which devolve upon the farmer's wife and how with good management and cool judgment she can overcome the perplexities, accomplish the work and still find some time for intellectual development.

"System in housekeeping," by Mrs. J. Sessions was a good sequel to the first paper.

Order is heaven's first law, and it should prevail in the house. She would endeavor to reduce the work to a minimum and let comfort be the maximum endeavor. Do certain things on certain days, certain weeks or certain seasons. Promptness is an excellent feature. Do not be so attached to order as to do certain things on certain days if it would endanger the health. Plan to economize time and strength. Let your head serve your hand. Teach the children to help themselves, and above all take time to be cheerful.

"What shall the farmer read?" was the subject of a paper by Mrs. M. Goolthrite. She said his reading shall be of a three-fold nature, viz., for the improvement of his physical, mental and moral condition. Since it is ordained that man shall earn his daily bread, he must necessarily devote a greater portion of his time to physical needs. Political and local papers are often read to the neglect of agricultural journals. Farmers should study market reports and be able to compare one year's prices with another. A few mistakes in buying or selling often prevent the two ends from meeting at the close of the year. New discoveries, current events, and the Farmers' Clubs give mental activity. Read to make ourselves cheery. We are inclined to underestimate a cheerful countenance. Read to be thoughtful, kind, tender-hearted and true.

It was voted to join with the Lebanon and other adjoining clubs in a grove meeting on the third of July.

D. G. LOCKE, Cor. Sec.

SPRINGPORT FARMERS' CLUB.

The club met with Mr. and Mrs. Wm. J. Burgess, April 10. After the opening exercises, the following resolution was unanimously adopted: "That we are opposed to appropriating any money to the State University, in addition to that now provided by law (one-sixth mill)."

The afternoon session was mostly taken up in discussing the question "Ought mortgages to be taxed?" The subject was presented by Ben A. Joy. He defined a mortgage as a conditional deed, putting the matter in questions, the whole being a direct one: Should there be no tax on mortgages, would it not be a benefit to the debtor class enabling them to secure money at a much less rate of interest? Would there not be an object for the lender to place his money when no tax was levied, thereby affording a lower rate of interest?

M. L. Day followed, expressing himself as being decidedly opposed to the repeal of the present mortgage tax law. Two classes only were favored: the lender and the borrower, while the class neither holding nor paying mortgages would be wronged to the extent of their proportion of the tax that the mortgagee escaped paying. To the

question raised by Messrs. Burgess and Delbridge, as to the tax paid on the mortgage being, to a certain extent, a double tax, Mr. Day argued that it was not.

Messrs. Whitman, Griffith and Novis were in favor of taxing mortgages as other property, but opposed to a double tax on any class of property. In closing the discussion Mr. Joy cited a statement recently made in the *New York World* to the effect that nearly one-half of our entire money circulation was then in the New York City banks, where it had been sent for safe keeping and investment. And there it could be loaned at a lower rate of interest than money could be in any other place in the country. The law of supply and demand, obviously applied in this case, the Michigan tax law of 1891 worked to the disadvantage of the debtor class, as the conditions now placed in mortgages were much more binding upon the mortgagor, who now paid the tax insurance, etc. He thought the repeal of the present mortgage tax law would be a benefit to all. The motion that we favor the repeal of the present mortgage tax law was lost by a close vote.

Mrs. Flora Landon presented the ladies' question, "Male or Female teachers for our schools." It was a subject of much importance. When satisfactory work was being done, would make no difference or change for sex; that the teacher should have good common sense, with a natural tact to lead and instruct the child were sentiments expressed by Mesdames. Hess, Joy, Wellington and Leighton. Next meeting 1 P. M., May 8th, at the home of Mr. Lowell Peters. Subject: "The sugar beet industry."

REPORTER.

RICHMOND AND RILEY FARMERS' CLUB.

Their club held their annual meeting at the home of Mr. and Mrs. Joseph Cottingham. During its one year of existence, the club has been quite successful; its membership has doubled and there is no lack of interest. And the prospect for its future success is very encouraging. After the club was called to order and the general literary exercises were disposed of, the club proceeded to ballot for officers for the ensuing year, electing the following: President, Joseph Cottingham; Vice-President, Joseph Stephenson; Secretary, Frank Dysinger; Assistant Secretary, Peter Canine; Corresponding Secretary, Mrs. Joseph Stephenson; Treasurer, Mrs. L. Haws.

President of the ladies' section, Mrs. Joseph Cottingham; Secretary, Mrs. George Sheky. The club then discussed the question "Shall mortgages be taxed." A vote taken after the discussion showed the majority in favor of their taxation.

The next meeting to be held at Mr. and Mrs. F. Dysinger's, May 10th.

MRS. JOSEPH STEPHENSON.

THE MEDINA FARMERS' CLUB.

The April club met at the beautiful home of Wm. D. James. Owing to the heavy rain of the previous night, April 23d, the attendance was not so large as usual, yet a goodly number were there to enjoy a most pleasant and profitable meeting.

At the afternoon session it was voted that the May meeting be dispensed with, and when we adjourn it be till the annual meeting in October. Mr. Henry Wirt invited the club to meet with him and the third Saturday in October is the date fixed.

The ladies' paper—"The Wayside Gleaner," was next read by Mrs. Lucetta Gallup, and was one of the best of the series, all having been of great merit, reflecting the greatest credit upon the literary ability of our ladies. The subject—"The Proceeding of Board of Supervisors," was taken up as outlined by the MICHIGAN FARMER, and discussed by Supervisors Jewell, Joyhin, Rogers and Hoff, in the order named. Mr. Baldwin spoke upon the subject "Some pests and diseases of our orchards, notably the black knot." Discussion participated in by President A. Weed, of Lenawee and Hillsdale Horticultural Association, and others, which closed the discussions of one of the most interesting meetings of the club.

C. A. JEWELL, Cor. Sec.

MONTCALM FARMERS' CLUB.

The Montcalm Farmers' Club held its first regular meeting at the residence of Mrs. M. J. Green, Friday evening, March 26.

The officers are as follows: President, Mrs. M. J. Green; Vice-President, Mr. E. N. Lincoln; Recording Secretary, Mrs. E. Hale; Corresponding Secretary, S. D. Peck; Treasurer, Mr. James Wilson; Directors, Mr. H. M. Bower and Mr. E. Munson.

The April meeting was held the 16th inst. The question for discussion was "What about the sugar beet?" The corresponding secretary was instructed to procure all possible information on the subject and also seed of the best varieties of beets for experiment in growing by members of the club. The club starts out with a membership of 17 and good prospects of future growth.

It was voted that the club report its organization and meetings to the MICHIGAN FARMER. We then adjourned for two months on account of the rush of work during the month of May.

S. D. PECK, Cor. Sec.

SALEM FARMERS' CLUB.

Our last meeting was held at the home of Mr. and Mrs. James Woodworth.

The first paper presented was by E. T. Walker, subject, "What is the most practical and best method of planting, pruning and tilling the peach orchard for the best interest of the owner?" Mr. Walker said he had outlived three peach orchards of his own planting and cultivation. He would select trees five feet high, straight, thrifty trees with good roots; variety should be large peaches, good bearers, good shippers, with the view of having ripe peaches the entire peach season. He gave minute directions for preparing the ground, setting the trees, trimming and pruning, advised searching for the white grub before setting, as they commence their work between the roots just below the surface; said he had

taken as many as three from a small tree before setting. To the questions asked after the reading of the paper, Mr. Walker replied in a way that showed plainly his thorough knowledge of the subject.

An essay by Mrs. Florence Ross, comparing the present prospects of farming and farm life with the past, was replete with wit and wisdom; it was listened to with marked attention by all. By a motion it was requested for publication in the MICHIGAN FARMER. This was followed with a paper by Daniel E. Smith, reviewing the work of the club the past year. There was no discussion on the Association question, but the club was unanimous in endorsing the Mortgage Tax law.

On motion the club voted to invite the Webster club to meet with them at the June meeting.

Next meeting to be held at the home of the president, Daniel E. Smith.—COR. SEC.

NORTH VERNON FARMERS' CLUB.

Our regular meeting was held with Mr. and Mrs. J. O. Marks, on April 7th.

J. J. Empe read a paper on "Success," in which he made it clear that there is no such factor in success as luck. Life is not a lottery. Success depends upon individual effort. He said many failed for want of some definite aim in life. Pluck, perseverance and intelligence are generally crowned with success.

Mrs. C. A. Patten also presented a paper entitled, "What is life?" She said action is the watchword. Life is what we make it. The noblest life of all is that which is lived in doing good to others.

The club question, What is the most frequent cause of failure among farmers? was led by A. Conrad. He said it was living beyond their means, trying to keep pace with their more wealthy neighbors.

Floyd Owen said he did not think there was any failure with him. What he lacked was the knowledge to sell at the right time.

A. Garrison, a merchant, who was present as a guest, thought that slowness in paying bills was one great cause.

S. C. Patchel: Not engaging in the right kind of farming. Did not think much of specialties. Believed in diversified farming.

J. J. Patchel did not confine his remarks to cause, but talked of causes. He attributed it to want of care, and negligence. Too many go it blind. He also suggested want of organization, also unjust legislation.

Thomas Cooling thought it was the want of thoroughness, striving to do too much. He likes to see a strife among farmers to see who can do the best.

Peter Patchel: Want of care of stock and tools, or in other words, failure to prevent unnecessary loss and waste.

The next meeting will be held at the home of Mr. and Mrs. S. C. Patchel.

PETER PATCHEL, Reporter.

THE OLIVE BRANCH FARMERS' CLUB.

The last regular meeting of the Olive Branch Farmers' Club was held Saturday, April 24th, 1897, at the home of President Wm. S. Jones. The quotation roll-call showed forty persons present. The discussion was opened by Rev. W. S. Buck, upon the question, "What is the greatest duty we owe our country at the present time?" After speaking of the obligations that go with patriotism and the special conditions of our particular period, he indicated duties of striving to secure public as well as private economy, legislation giving all a fair chance as against monopolies, corporations and trusts, and the removal of the slavery of intemperance.

Harrison Walters thought we have a duty to enforce the laws we have.

R. K. Divine thought that in view of what is being done in our legislatures, and of our not being able to rely on the men we elect, we should be careful whom we cast our votes for.

Leroy Brown spoke of the great good resulting from the organization of farmers' clubs, they having weight to make senators and representatives legislate more for the people.

Wm. Casement, referring to the word "peasantry" as having been used by two speakers, said there is where we are drifting. There is too much selfishness on every hand.

Marion Jones did not believe there is less patriotism now than 100 years ago.

Mrs. N. J. Ellis said one of our greatest duties is to economize and teach young people to depend on themselves.

Mrs. D. M. Garner said there are evils now that may culminate in larger evils. Those who have stood by their highest convictions were just as much heroes as those that went out to war—as Neal Dow for instance.

Rev. Ling opening by saying he would have to steal somebody else's thunder, touched on many points previously brought up, and said the saloon is a great evil and our duty is to blot it out.

Mr. Griggs said our greatest duty is to divorce our country from the liquor traffic. Mrs. Walters thought the club members were getting to be calamity howlers.

Mr. Bigelow said we need to make the law-makers know there is a God in Israel and that they will have to do right.

Mr. Jones thought it is the duty of our officers to see that laws are enforced, and not for us to make complaints.

Mrs. Jackson Voorheis thought we are not calamity howlers, but that we have a right to talk.

Jackson Voorheis, having spoken of the enforcement of the laws against the saloons, said our duty is to draw the line and put down everything that is wrong.

Lee Wright said it is among our greatest duties that we should be honest, self-reliant and self-supporting.

Certain ones who had already spoken, having touched upon the question further, the discussion of the second question was taken up, viz., "Ought mortgages to be

taxed?" The general sentiment was that they should be, and that the present law on this subject should not be repealed.

Invitations were received and accepted for meetings for three months ahead, the next meeting to be held with Mr. and Mrs. Harrison Walters, of Clarkston. The time of meeting was changed to 1 p. m. for the next six months, the members remaining for supper instead of partaking of dinner, as they had done from tables bountifully served by Mr. and Mrs. Jones. The question for the next meeting will be: "What causes have led to war between Greece and Turkey, and have the powers acted in an honorable manner?"

REPORTER.

E. CAMBRIDGE AND W. FRANKLIN FARMERS' CLUB.

This club met April 10th., in large numbers and with unwearied zeal in looking after the many-sided interests of the farmers.

After a fine literary program the club took up the first subject for discussion, a well written paper, on the following theme: "Would society be benefited by giving the franchise to women?" by Mrs. John Stafford.

All the ladies proved their fitness for forensic honors by talking very wide of the real subject.

One member, a woman, declared the ladies did not generally want "Woman's Suffrage."

Hon. T. M. Camburn was with us and gave great satisfaction by his willingness to answer the score or more of questions asked by various members.

After a full discussion of the subject of the "Mortgage Tax Law," it was resolved, with only two dissenting votes, that "We are decidedly opposed to the repeal of the Mortgage Tax Law."

It is proposed at our next meeting to learn how many of our members take the MICHIGAN FARMER, a paper that ought to be on the table of every farmer in the State. It is worth more than \$1 a year to any wide-awake progressive farmer, and has helped wonderfully in the farmers' club movement that is doing so much for rural education and betterment in many ways.

The club adjourned to meet on the 8th of May, at the residence of Mr. and Mrs. John Bunn, in Franklin.

L. W. GERMAN, Cor. Sec'y.

SANDSTONE AND BLACKMAN FARMERS' CLUB.

The regular April meeting was held April 17th, at the home of Mr. and Mrs. Geo. Greenwood. Though an epidemic of measles kept many away, an interesting and profitable program was carried out. Three new members were received.

S. L. Crawford gave a paper on "The most profitable kind of stock and fowls for the farmer to raise." While he thought that the varieties should largely be determined by individual preference, the general opinion of the club seemed to be that one should keep several kinds. When horses are cheap perhaps hogs would be profitable, or when cattle were of small value, sheep might be of worth. So the farmer who is not limited to one kind of stock is more likely to have the kind that is profitable. Good words were spoken of the turkey as an eater of grasshoppers.

The Mortgage Tax law was the Association question for the day. This was opened by A. Avery. Frank Maynard gave a history of mortgage tax laws in Michigan, and explained the workings of each. There was an interesting discussion of the question, showing much thought and a desire to be just in judgment. An expression of the members present showed the club to be strongly opposed to the repeal of the law as at present before the legislature.

The May meeting is to be held at the home of Dr. and Mrs. A. B. Grant.

FLORENCE E. DANIELS, Cor. Sec., Per. G. J. G.

NORVELL FARMERS' CLUB.

At the meeting with President T. B. Halladay on April 24th, the discussion on the work of the supervisors was continued. The recent action of the board in voting to give the prosecuting attorney \$250 per year for office rent was severely criticised, the October session having fixed the salary of that official at \$1,500, including office rent. Some questioned their power to do so, but others thought an official's salary might be raised but could not be lowered during his term of office.

The proposition to raise \$15,000 to rebuild the present court room, to be submitted to the voters of the county on June 4, was generally favored.

A brief expression on the subject of mortgage taxation was called for and all present were of one mind in believing they should be taxed. S. W. Holmes said a mortgage is property; it yields an income; if exempted, other property must pay the more.

A. R. PALMER, Sec'y.

LINDEN FARMERS' CLUB.

The Linden Farmers' Club met at the residence of Mr. and Mrs. M. McKugh, of Linden, Saturday, April 17. A goodly number were present.

There were interesting discussions in favor of the Kimmis bill. Taxation was also discussed.

The next meeting will be held at the home of Mr. and Mrs. M. J. Harris.

Cor. Sec'y.

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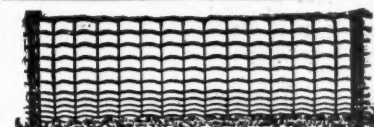
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3 Grand Letters 3

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COUGHING.—I have a horse, five years old, that commenced coughing about one week ago. I feed oats, timothy hay and millet. He eats and drinks all right. What had I better do for him? J. C. B., Swartz Creek, Mich.—Give your horse half an ounce powdered licorice and two drams African ginger in his feed three times daily until he is well.

SHEEP HAVE SORE THROAT.—I would like to know what ails my sheep. Swellings appear under their chops; they get dumpish and die after being sick a few days. If the swelling is punctured, a watery discharge comes from the opening. H. E. F., Reading, Mich.—Apply equal parts tincture iodine and alcohol to throat twice a day. Give ten grains of quinine three times a day, and half a dram tincture of iron twice a day.

SEROUS ABSCESS.—What ails a young sow one year old? About six weeks ago a bunch came on her throat and it keeps on growing until it is now as large as a yellow jacket's nest, and about the same shape. She has pigs three weeks old, and seems to be doing well. How should she be treated? J. W. J., Prairieville, Mich.—Make an opening into abscess with small knife and allow effusion to escape, and inject with one part carbolic acid to thirty parts of water, twice a day.

INDIGESTION.—I have a dog three and one-half years old. Last summer he was afflicted with mange, but seems to be cured of that now. He refuses to eat vegetable food, and is very fond of meat. Thinking that meat was not a good diet for him, I have tried to compel him to eat other food. S. D. C., Holton, Mich.—Feed your dog all the well cooked lean meat that he will eat, not oftener than twice a day. His diet was not the cause of his having mange. Give him half a dram powdered aconite nut once a day. He may have worms, causing him to keep thin.

MAMMATIS.—I have a young heifer due to calve soon. Her udder is very badly caked and inflamed. I tried to milk her and instead of getting milk, almost pure blood came from the teat. What can I do to bring it to milk? She never had a calf before. I have rubbed udder with skunk's oil every day. H. H., Dexter, Mich.—Your cow bruised her udder, setting up inflammation. Reduce her food; give her half a pound epsom salts twice a day until bowels act freely. Foment udder with hot water twice a day. Furnish her with plenty of bedding. Do not milk her until after she calves.

SORE THROAT.—What is the matter with my sheep? They swell up under the chops and around the nose. They have some discharge from nose. They are dull and stupid and die after being sick a day or two. Others live six or eight weeks. I have fed cornstalks twice a day, straw and carrots once a day, corn two-thirds and oats and middlings one-third, twice a day. They have had one and one-half pounds a day each. I have given two table-spoonfuls turpentine and two ounces salts. Some of them seem to be getting better. C. L. N., Otsego, Mich.—Apply equal parts aqua ammonia, turpentine and raw linseed oil twice a day. Give each sheep ten grains quinine, twenty drops fluid extract nuxvomica three times a day.

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